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North Saskatchewan River

Characterization of Water Quality in the Vicinity of Edmonton (1982-83)

Part II

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NORTH SASKATCHEWAN RIVER:
CHARACTERIZATION OF WATER QUALITY
IN THE VICINITY OF EDMONTON (1982-1983)

PART II

ZOOBENTHIC SURVEYS OF SPRING, SUMMER, AND FALL 1982

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SUMMARY

A study of the water quality of the North Saskatchewan River as reflected by the zoobenthos or benthic invertebrates was initiated in the spring of 1982. Its primary objectives were the characterization of the river as it passes through the Edmonton area, and the identification of the degree of impact from urban development. Another objective was to evaluate complementary zoobenthic studies as integrators of water quality and as aids to the interpretation of chemical and physical data. Benthic invertebrate samples were collected in spring, summer, and fall 1982 at 11 sites from Devon to Pakan on both left and right banks.

The results of multivariate analyses (cluster and principal component analyses) and an evaluation of commonly used community parameters (total numbers, Shannon-Wiener diversity, distribution of numbers among taxa at each site, and distribution of numbers among sites for each major taxon) led to the identification of three major groups of sites. These groups represent zones of different water quality in the river.

Zone I was a group of sites which were located upstream of major point-source effluents. Benthic invertebrates were virtually unimpacted and the invertebrate assemblage was indicative of river water of high quality. The zoobenthos was characterized by relatively low total numbers and by high values for the Shannon-Wiener diversity. Taxa such as Ephemeroptera, Plecoptera, and Trichoptera, (known to be intolerant of high organic loads) were as important numerically as more tolerant taxa.

Zone II was an impacted group of sites located downstream of the major point-source discharges in the Edmonton area. Total benthic invertebrate numbers were much higher than in Zone I and tolerant taxa were numerically dominant. Diversity index values dropped.

Zone III was a group of sites showing some recovery and situated downstream of Zone II. Total invertebrate numbers remained much higher than in Zone I, but the zoobenthic assemblage of Zone I and Zone III had features in common as shown by similar diversity values and similar distributions of numbers among major taxonomic groups.

Municipal and industrial point-source discharges were responsible for the existence of zones of different water quality in the North Saskatchewan River from Devon to Pakan. The relative length of each zone at different times of the year was influenced by the flow rates and the water temperature regime.

Municipal discharges (wastewater treatment plant effluents, storm and combined sewer effluents) are the main contributors to the nutrient and total organic loads of the North Saskatchewan River. Certain invertebrate taxa responded to these point-source discharges by increasing in numbers. The magnitude and consistency of this type of response was greatest below the Gold Bar Wastewater Treatment Plant. The impact from storm and combined sewer effluents was most evident during summer and fall. During periods of heavy runoff, combined sewers known to discharge a mixture of sewage and surface runoff into the North Saskatchewan River induced a much sharper increase in invertebrate density than did storm sewers which discharged mainly surface runoff into the river.

Specific impacts of industrial discharges were masked by the enrichment effects of the Gold Bar Wastewater Treatment Plant. There were no consistent indications of an overall toxic effect in the study area delimited by the Devon and Pakan bridges. Enrichment, particularly below Fort Saskatchewan, had a greater impact on benthic invertebrates. However, the purpose of this study was to assess the integrated impact of all effluents on the water quality of a given section of the North Saskatchewan River, not to measure the impact of industrial point-source effluents.

Seasonal differences in water temperatures and flow rates explained the differences in the relative lengths of Zone II and Zone III in spring and fall. Biological and chemical breakdown processes take place more rapidly at higher temperatures, provided that dissolved oxygen levels are adequate. The North Saskatchewan River had satisfactory dissolved oxygen levels throughout the year in 1982, which permitted benthic invertebrates to recover faster below point-source effluents in the fall than in the spring. The faster recovery in the fall of 1982 was undoubtedly related to the scouring or cleansing process which accompanied the unusually high discharge in the spring of that year. Invertebrate data suggested the existence of a cyclic and dynamic pattern whereby the river bed is cleaned by scouring if spring peak discharges are adequate, and gradually enriched and fouled in downstream direction during summer and fall by discharges from the Edmonton urban area.

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1.0 INTRODUCTION

This report summarizes the results of a zoobenthic survey which was conducted during the spring, summer, and fall of 1982 in the North Saskatchewan River at eleven locations between and including the Devon and Pakan bridges. This survey comprised Part Two of a broader water quality survey conducted by the Water Quality Control Branch, Alberta Environment, on the North Saskatchewan River in 1982 and 1983. The results of the water chemistry, chlorophyll, and bacteriological studies are presented in Part One.

The principal objectives of the zoobenthic survey were:

1. to provide a spatial and temporal characterization of the North Saskatchewan River zoobenthic community as it reflects river water quality in the vicinity of Edmonton City by assessing bank-to-bank, upstream-downstream, and seasonal differences.
2. to assess the impact of urban development in the Edmonton region on the zoobenthic community of the North Saskatchewan River.
3. to evaluate the zoobenthic survey as a complementary study to the water chemistry survey.

Part Two was undertaken with the expectation that zoobenthic data and physical-chemical data provide converging lines of evidence on water quality and, therefore, that they should complement rather than replace each other. The value of such a complementary approach has been discussed extensively in the literature (e.g. Hynes 1970, Cairns and Dickson 1973). Surveys of chemical and physical variables provide a means of detecting and quantifying a wide range of pollutants in rivers; they also permit the determination of point-sources for these pollutants and provide the basis for enforceable standards. However, water chemistry surveys describe conditions at the time of sampling and, depending on flow regimes, mixing patterns, and type of effluent discharge, the data and their interpretation may not be representative of the nature and extent of pollution. Pollutants which are present at low concentrations or which occur sporadically may remain undetected by standard analytical techniques; such pollutants can have significant impacts on river biological communities, because they are exposed to these substances over an extensive period of time.

Because quality of the water is only fully manifested in relation to living organisms, it is important to monitor the effects of water quality changes on biological communities. Of the total aquatic fauna present in a river, the zoobenthos offers the greatest potential in terms of biomonitoring. Because of the low mobility of most species, the zoobenthos has less ability to escape adverse water quality conditions than fish or plankton. Although zoobenthic taxa may respond to the deterioration of their habitat by drifting, most species are restricted to a given river section by their low mobility potential. Here, they remain exposed to changes in water quality over time and they respond according to their tolerance levels.

The zoobenthic community integrates variations in water quality over an extensive time period prior to sampling and, consequently, can be used successfully to aid in the assessment of water quality. However, the complexity and diversity of interactions of components of biological communities with each other and with their abiotic environment make it difficult to find a fully satisfactory descriptor of water quality in terms of biological parameters*. To date it has not been feasible to set water quality standards in terms of absolute quantitative biological data. Therefore, one of the objectives of Part One of this study (i.e. a comparison of current river water quality with the Alberta Surface Water Quality Objectives**) is not applicable to Part Two, the zoobenthic survey.

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* "parameter" in the sense of Sutcliffe (1979).

** Alberta Environment 1977.

2.0 METHODS

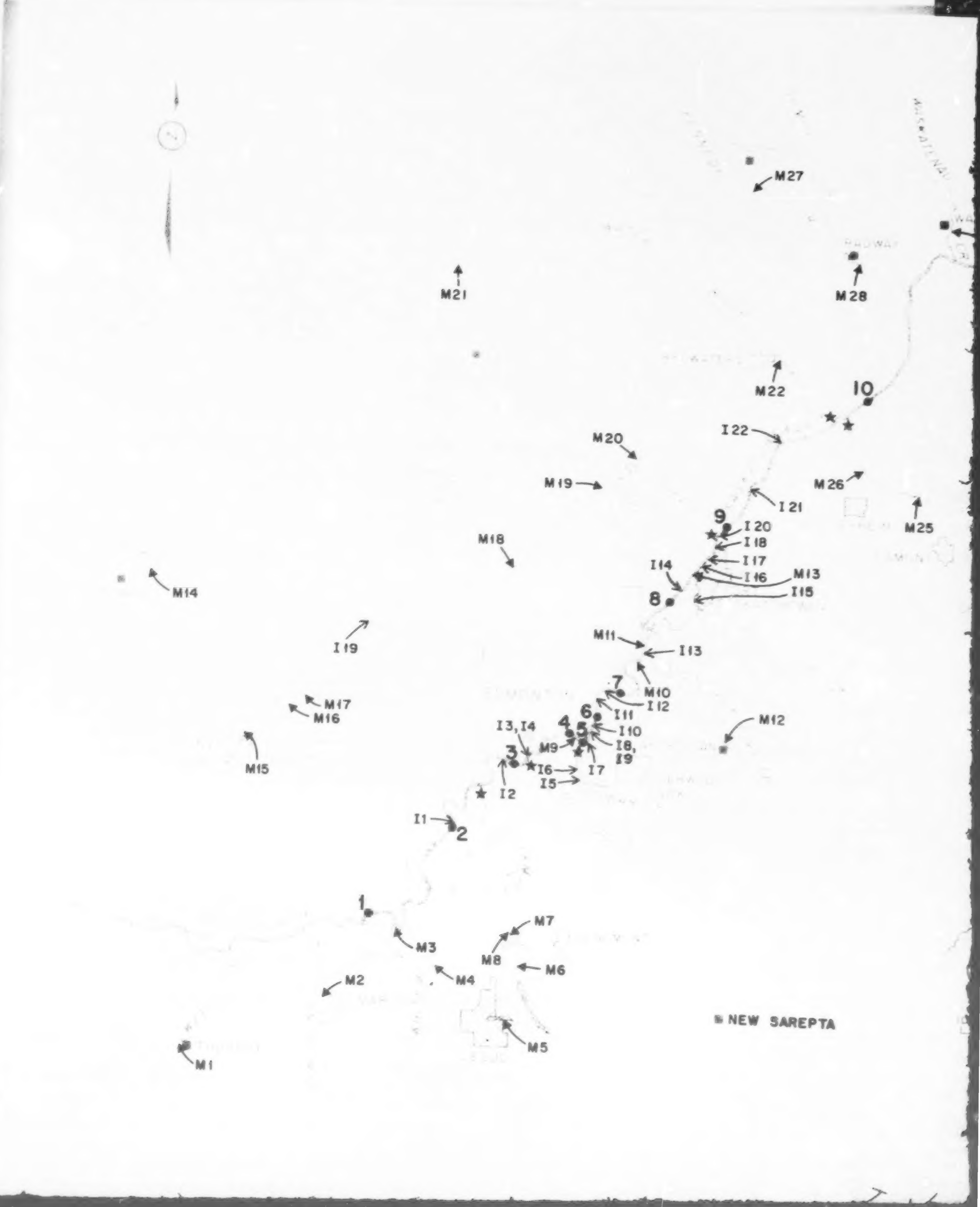
2.1 The Study Area and Study Design

The zoobenthic survey was conducted in the section of the North Saskatchewan River extending from a location near the Highway 60 bridge at Devon to a location downstream of Pakan Bridge at the old river ferry crossing near Victoria Settlement (Fig. 1). The major industrial effluents entering this section of the river are listed in Table 1a; the municipal sewage effluents are listed in Table 1b. Major effluent locations are shown in Figure 1. The main historic, geologic, geographic, and other river basin characteristics and the mixing processes in the study section of the river are described in Part One of this report.

The zoobenthos was sampled three times in the North Saskatchewan River during the open-water season of 1982:

Spring	May 17 to June 3
Summer	August 9 to August 17
Fall	September 23 to October 10

Because of the integrator quality of the zoobenthos and because of the relative longevity of most zoobenthic taxa (several months to two or more years), it was neither necessary nor practical to sample zoobenthos with the same frequency that water samples were taken for chemical analysis.


M27
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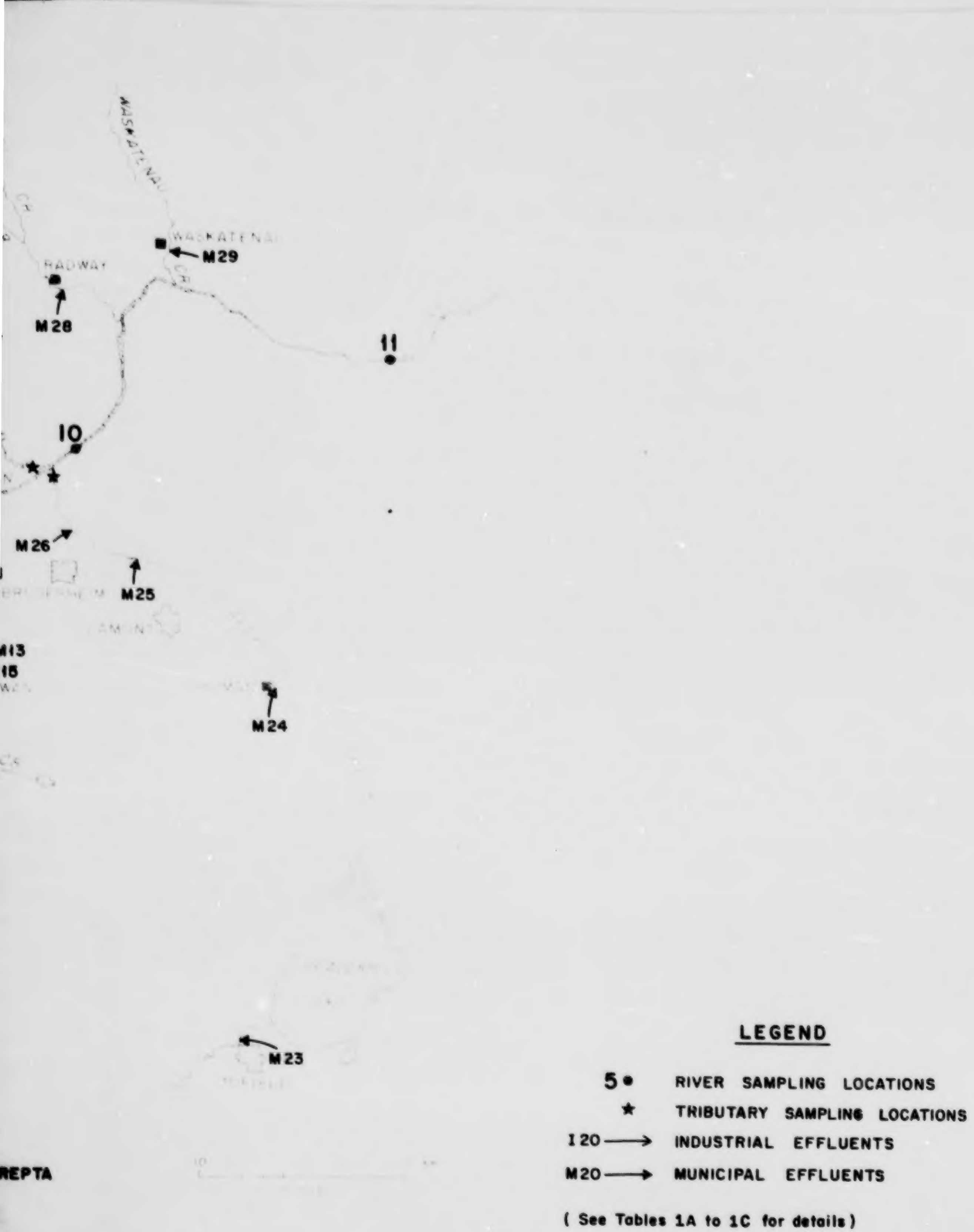
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M29
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11
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M26
BRUDERHEIM
M25
LAMONT
M13
15
M24
M23
REPTA
LEGEND
5● RIVER SAMPLING LOCATIONS
★ TRIBUTARY SAMPLING LOCATIONS
I20⟶ INDUSTRIAL EFFLUENTS
M20⟶ MUNICIPAL EFFLUENTS
(See Tables 1A to 1C for details)

Fig. 1. North Saskatchewan River study area .

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TABLE 1a. Major Industrial Effluents Entering the North Saskatchewan River in the Vicinity of Edmonton City, 1982.

I1. E. L. SMITH WATER TREATMENT PLANT

I2. UNIVERSITY OF ALBERTA (THERMAL)

I3. ROSSDALE POWER PLANT

I4. ROSSDALE WATER TREATMENT PLANT

I5. STELCO

I6. C.I.L.

I7. IMPERIAL OIL REFINERY

I8. SYNCRUDE RESEARCH

I9. TEXACO REFINERY

I10. GULF REFINERY

I11. CELANESE CANADA, UNIROYAL, FIBERGLASS

I12. CLOVERBAR POWER PLANT

I13. ALBERTA CONCRETE, NESBIT

I14. ALBERTA FOOD PRODUCTS

I15. MANVILLE CANADA INC.

I16. SHERRITT GORDON

I17. UNION CARBIDE

I18. DOW CHEMICAL

I19. ALBERTA CONCRETE, VILLENEUVE

I20. DIAMOND SHAMROCK

I21. SHELL REFINERY, SCOTFORD

I22. ESSO CHEMICALS, REDWATER

TABLE 1b. Municipal Sewage Effluents* Entering the North Saskatchewan River directly or indirectly in the Vicinity of Edmonton City, 1982.

M1. THORSBY
M2. CALMAR
M3. DEVON SEWAGE TREATMENT PLANT
M4. INTERNATIONAL AIRPORT
M5. LEDUC
M6. NEW SAREPTA
M7. BEAUMONT
M8. NISKU
M9. GOLD BAR WASTEWATER TREATMENT PLANT (GBWTP), EDMONTON
M10. BREMNER SEWAGE LAGOONS
M11. ST. ALBERT SEWAGE LAGOONS
M12. ARDROSSAN
M13. FORT SASKATCHEWAN
M14. ONOWAY
M15. STONY PLAIN
M16. PARKLAND VILLAGE
M17. SPRUCE GROVE
M18. MORINVILLE
M19. BON ACCORD
M20. GIBBONS
M21. LEGAL
M22. REDWATER
M23. TOFIELD
M24. CHIPMAN
M25. LAMONT
M26. BRUDERHEIM
M27. THORHILD
M28. RADWAY
M29. WASKATENAU

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* Since this study was completed, the Edmonton Regional Wastewater Treatment Plant has become operative, combining some of the above treatment facilities. These changes are described in greater detail Part One of this report.

TABLE 1c. Regular Zoobenthos Sampling Locations, North Saskatchewan River, 1982.

Location Number	Location Name	Relative River Kilometres	Location Description	Selection Criteria
1.	DEVON	0	Near Devon Bridge, Highway 60	Control location (background conditions.
2.	E. L. SMITH	24	Immediately upstream E.L. Smith water treatment plant	To determine impacts from Devon municipal effluent on water supply
3.	ROSSDALE	40	100 m downstream of 105th St. Bridge-Rossdale	To determine impacts from large separate storm sewers on water quality for Rossdale Water Treatment Plant
4.	50TH STREET FOOTBRIDGE	51	100 m upstream of 50th St. Footbridge	To identify impacts from large combined storm sewers before Gold Bar Wastewater Treatment Plant
5.	RUNDLE FOOTBRIDGE	52	100 m downstream of Rundle Park Footbridge	To identify impacts from Gold Bar Wastewater Treatment Plant prior to industrial discharges
6.	BEVERLY BRIDGE	55	200 m downstream Beverly Railway Bridge	To incorporate effects of industrial - part refinery discharges
7.	CLOVER BAR	61	4 km downstream of Celanese; downstream of Clover Bar	To incorporates all municipal and industrial effluents from Edmonton
8.	FORT SASKATCHEWAN	79	200 m upstream Fort Saskatchewan Railway Bridge	Downstream of St. Albert and Bremner lagoons
9.	STURGEON	89	Downstream of confluence with Sturgeon River	To include effects of Fort Saskatchewan industrial and municipal effluents
10.	VINCA	112	500 m downstream of Vinca Bridge	To reflect all major inputs; also robot monitor location
11.	PAKAN	163	10 km downstream of Pakan Bridge	Location reflecting complete mixing in the river; also near a routine monitoring site

The eleven regular sampling locations for 1982 are listed in Table 1c and are shown in Figure 1. Zoobenthos sampling sites were virtually the same as left-bank and right-bank water chemistry sampling sites in 1982.

The farthest upstream and downstream locations were chosen to represent relatively unimpacted (control) sites, and sites within the recovery zone, respectively. The other nine locations were selected on the basis of their representativeness and value in identifying potential impacts from certain known discharges. At each sampling location, two sampling sites were established, one near the right-bank and one near the left-bank.

Although there are dams, agricultural and oilfield developments, and some population centres (Rocky Mountain House and several smaller centres) upstream of Devon, the NSR at the Devon bridge is considered relatively unimpacted by domestic and industrial waste effluents (unpublished data, Alberta Environment). The first sampling location is upstream of the Devon Sewage Treatment Plant, at the site of an Alberta Environment River Water Quality Monitoring Network monitor.

The mixing studies reviewed in Section 3.0, Part One of this report indicated incomplete mixing as far downstream as Vinca bridge on Highway 38. However, it is assumed that mixing is complete most or all of the year at Pakan Bridge, another routine station of the River Water Quality Monitoring Network. The site was therefore chosen as the lower sampling location.

2.2 Field Methods and Site Selection

Under natural conditions (i.e. absence of pollution) in any section of a river, localized differences in faunal composition are mainly due to variations in habitat characteristics. Current velocity and substrate type are often the most important in this regard (Hynes 1972). All sites selected for benthic invertebrate sampling were riffles in order to provide a high similarity in substrate type among sites. An attempt was made to fix precise sampling location so that successive sampling was done in the same type of substrate. The substrate of all sites except the Sturgeon left-bank site, which was boulder and cobble, was medium to coarse pebble mixed with sand and silt (terminology according to Cummins, 1962). There was less silt at most upstream sites, such as Devon, than at sites downstream of Edmonton, but there was more sand at upstream sites than at downstream sites. The variation in amount of silt from site-to-site was greater during the spring sampling than during the fall sampling; during the summer all sites had a similar amount of silt.

At least 3 measurements of current velocity were made at each site using a Gurley current meter.

At each site, 5 Neill cylinder samples (Neill 1938), representing a sampling area of 0.1 m^2, were collected and filtered through a collecting net with mesh aperture of 210 μm. Care was taken to press the cylinder securely into the substrate to prevent the loss of specimens through gaps between the sampler and the substrate.

Larger stones were individually cleaned by gentle scrubbing and rinsing in the cylinder. A narrow shovel was used to disturb the substrate for approximately one minute. Samples were preserved in 4% formaldehyde immediately after collection.

2.3 Laboratory Methods

Samples collected in the field were stained with Rose Bengal before being sorted and enumerated in the laboratory under a dissecting microscope. Mason and Yevich (1967) have shown that the efficiency with which zoobenthic specimens are separated from the detritus fraction is greater in samples which have been stained, because animals are more easily distinguished from algae and detritus. Sorting under a dissecting microscope may be more time consuming than sorting in the field, but it is a more accurate method for the processing of river benthos.

Invertebrates were identified according to Bauman *et al*. (1977), Clarke (1973), Edmunds *et al*. (1976), Merritt and Cummins (1979), Pennak (1953), Usinger (1956), and Wiggins (1977).

2.4 Data Analysis

The Shannon-Wiener Diversity Index is one of the most widely used mathematical expressions of abundance and diversity in biological systems, although many other expressions have also been proposed to summarize extensive data sets in concise and meaningful terms (e.g.

Shannon and Weaver 1949, Simpson 1949, King and Ball 1964, Cairns et al. 1968, Chutter 1972, Hilsenhoff 1977, Armitage et al. 1983). One of the major purposes of these expressions is to relate their calculated values to environmental conditions, such as levels of pollution, as a means of appraising the degree or extent of environmental impact (Hellawell 1977, Godfrey 1978, Perkins 1983). In this report, the Shannon-Wiener diversity index (H') was used and calculated according to the following formula:

$$H' = -\sum_{i=1}^{n} p_i \ln p_i$$

where p_i = n_i/N
n_i = numbers in taxon i
N = total numbers
n = number to taxa

The Shannon-Wiener diversity index or H' is a quantitative measure of diversity which takes numbers per taxon into account, but is not affected by the actual species composition or assigned tolerance levels for individual species as are most "biotic indices" (e.g. Hilsenhoff 1977, Rooke and Mackie 1982, Armitage et al. 1983). The usefulness of H' in assessing the impact of pollution is based on the assumption that pollution-related factors affect total community structure. Unaffected communities are, in general, characterized by an even distribution of numbers per species (i.e. many species with few individuals per species), whereas affected communities tend to have skewed distributions (i.e. high densities for a few species; low numbers for the remaining species). Generally, H' has the highest values in unpolluted habitats, and decreases as the degree of pollution increases (Cairns et al. 1972, Hughes 1975). In unpolluted waters, the index ranges from 3.0 to 4.0; in stressed communities, it may drop below 1.5 (Wilhm 1970).

Cook (1976) has suggested that H' is sensitive to impacts along the entire pollution spectrum from unpolluted to heavily polluted. Although H' has been used successfully as an indicator of pollution impact in numerous studies, one should be cautious in the interpretation of diversity values (Godfrey 1978, Hughes 1978, Murphy 1978, Cook 1976). For example, many studies have shown that H' is inversely correlated with pollution, but there are exceptions to this relationship (Harrel and Doris 1968). Trends in H' values along a gradient might be meaningful, but it would be spurious to elaborate on slight differences in H' values which could be due to chance (Cook 1976). Hughes (1975) has shown that factors such as sampling method, area sampled, time of year, and taxonomic level of identification all influence the value of H'. Therefore, comparisons between diversity values are not legitimate when sampling and processing techniques are inconsistent or when samples are compared for different seasons.

2.4.1 Cluster Analysis and Principal Component Analysis

Two multivariate techniques, cluster analysis and principal component analysis, were used in the analysis of zoobenthic data. Both analyses provide a means of comparing samples using all numerical abundance data for each taxon. Some theoretical considerations and practical applications of these two techniques have been discussed by Gauch and Whittaker (1972), Sinhai (1977), Sprules (1977) and Green (1979). Cluster analysis and principal component analysis were performed with the aid of the CLUSTAN-Package (Wishart 1978).

Cluster analysis is a technique whereby the data are analyzed by site and are grouped according to similarities among the zoobenthic species (i.e., qualitatively and quantitatively). The similarity index used in the present analysis was the squared euclidean distance. A variety of techniques can be applied to the resulting similarity matrix for the fusion of similar clusters. The Ward (1963) method was used here. Results were obtained graphically in the form of a dendrogram. Site data sets with similar zoobenthic associations clustered together; the differences in similarity coefficients between clusters at their fusion points was used as a relative measure of the degree of similarity (or dissimilarity) between clusters.

The description by Green (1979, p. 82) shows how principal component analysis converts the "m samples by p variables" data set to a "p-by-p" covariance or correlation matrix. The roots and vectors (called eigenvalues and eigenvectors) of this p-by-p matrix are then found; they correspond respectively to the variance associated with each principal component and to the principal component coefficients b_{i1} in the following function:

$$Y_i = b_{i1} X_1 + b_{i2} X_{2+} \ldots + b_{ip} X_p.$$

Principal component analysis transforms observations on a set of p variables $X_{j=1,p}$ to observations on a new set of quantitative variables $Y_{j=1,p}$ where the new set has the following properties (see Marriott 1974, cited by Green 1979, p. 81):

1. Each new variable Y_i is a linear additive function of the old variables:

   $Y_i = b_{i1} X_1 + b_{i2} X_2 + \ldots + b_{ip} X_p$

2. The first new variable extracted (Y_1) is the first principal component and accounts for the largest possible amount of variation in the data set.

3. Each additional new variable accounts for the largest possible amount of remaining variation, independent of the previously derived principal components. Therefore, the new variables Y_i will be uncorrelated, unlike the original variables X_j. They will also tend to be more normally distributed.

2.4.2 One-Way Analysis of Variance

A one-way analysis of variance (ANOVA) was used to compare the means for selected benthic parameters from site groups (clusters) which were identified by multivariate analysis. The test was performed on the following parameters: numbers of Nematoda, Oligochaeta, Ephemeroptera, Plecoptera, Trichoptera, Chironomidae; total invertebrate numbers; total number of invertebrate taxa; Shannon-Wiener diversity.

For each parameter, the data set was tested for normality with the Kolmogorov-Smirnov test (Seigel 1956; Hull and Nie 1981). If a normal distribution was rejected ($p>0.05$), data were transformed to ln(x+1) (Elliott 1977). The Kolmogorov-Smirnov test on the transformed data showed that the normality was increased satisfactorily in all cases. Normally distributed data were analyzed with a one-way ANOVA to determine the significance of differences between sites for each parameter (Sokal and Rohlf 1969, Elliott 1977, Nie _et al_. 1975). If such differences were significant, a Student-Newman-Keuls test (Sokal and Rohlf 1969, Nie _et al_. 1975) was performed to determine whether the means for site groups were significantly different.

3.0 RESULTS

3.1 General Description of the Invertebrate Community

The benthic invertebrate taxa which were collected in the North Saskatchewan River in this study are listed in Table 2. A total of 107 zoobenthic taxa was recorded for the overall study, with 77, 75 and 94 taxa for the spring, summer, and fall samplings, respectively. Table 2 also gives a general indication of the abundance of the various taxa in the three sample sets. The raw benthic invertebrate data sets for the spring, summer, and fall surveys are included in Part Three. For the convenience of readers who may not be familiar with both the scientific and common names for some of the taxonomic groups discussed in this report, a summary is given in Appendix I.

The major taxonomic groups identified in the benthos of the North Saskatchewan River were Chironomidae (particularly Chironomini and Orthocladiinae), Oligochaeta (mostly Naididae and Tubificidae), Nematoda, Ephemeroptera, Trichoptera, and Plecoptera. Except for the mollusk _Ferrissia_, which was fairly abundant during summer and fall, the remaining taxa (i.e., Turbellaria, Hirudinea, Collembola, Odanata, Lepidoptera, Arachnida, miscellaneous Diptera, and miscellaneous mollusks) were generally of minor numerical importance.

Ephemerella and _Baetis_ were the dominant mayflies in spring samples, but _Tricorythodes_ and _Heptagenia_ were more important in summer and fall.

TABLE 2 List of Invertebrate Taxa found in samples from the Spring, Summer and Fall Survey.

	SPRING	SUMMER	FALL
Coelenterata	x	x	x
Nematoda			
Mermithoidea	xx	xx	xx
Unid. Nematoda	xx	xx	xx
Turbellaria	x	x	x
Acanthocephala			
Neoechynorhynchus	x	–	–
Cestoda			
Caryophillidae	x	–	–
Oligochaeta			
Tubificidae	xx	xx	xx
Naididae	xx	xx	xxx
Enchytraeidae	x	x	x
Lumbricidae	x	–	–
Hirudinea			
- Eropbdella punctata	x	x	x
- Glossiphonia complanata	x	–	x
- Helobdella stagnalis	–	x	–
- Nephelopsis obsura	x	–	–
Amphipoda			
- Gammarus lacustris	x	–	x
- Hyalella azteca	x	x	x
Copepoda			
- Cyclopoida	x	x	xx
- Calanoida	x	x	x
- Harpacticoida	x	x	x
Cladocera			
- Ilyocryptus sordidus	–	–	x
- Misc. (e.g. Daphnia sp., Bosmina sp, Ceriodaphnia sp., Acroperus harpae, Pleuroxus procurvus)	x	x	x
Ostracoda			
Rotifera Misc. (Lecane monostyla, Asplanchna sp., Brachionus spp.)	x	x	x
Ephemeroptera			
Ameletus	–	–	x
Baetis	xx	x	xx
Caenis	x	x	x
Centroptilum	–	x	x
Ephemera	x	x	x
Ephemeridae	–	x	–
Ephemerella	xx	x	x

TABLE 2 List of Invertebrate Taxa found in samples from the Spring, Summer and Fall Survey Cont'd.

	SPRING	SUMMER	FALL
Heptagenia	x	xx	xx
Heptageniidae	x	x	xx
Hexagenia	x	-	x
Lepthophlebia	-	-	x
Paraleptophlebia	-	x	x
Parameletus	-	-	x
Pseudocleon	-	x	x
Rhithrogena	x	x	x
Stenonema	-	x	x
Tricorythodes	x	xx	xx
Unid. Nymphules	x	xx	xx
Trichoptera			
Arctopsyche	x	x	x
Brachycentrus	x	x	x
Ceraclea	x	x	x
Cheumatopsyche	xx	xx	xx
Glososoma	x	x	x
Hydropsyche	xx	xx	xx
Hydropsychidae	x	xx	xx
Hydroptila	x	x	
Lepidostoma	x		
Leptoceridae	x	x	x
Mayatrichia	-	x	x
Neotrichia	-	x	x
Neureclipsis	x	-	x
Oecetis	x	x	x
Onocosmoecus	x	-	-
Polycentropus	-	-	x
Psychomyia	x	x	xx
Plecoptera			
Acroneuria	x	x	
Alloperla	x	x	x
Capniidae	-	-	x
Chloroperlidae	xx	x	xx
Isogenus	x	x	x
Isoperla	x	x	x
Perlidae	x	x	
Perlodidae	xx	x	xx
Pteronorcys	x	-	-
Taeniopteryx	x	-	x
Unid. Plecoptera	xx	x	xx
Collembola	x	x	x

TABLE 2 List of Invertebrate Taxa found in samples from the Spring, Summer and Fall Survey Cont'd.

	SPRING	SUMMER	FALL
Odonata			
- *Aeshna*	-	-	x
- *Gomphus*	x	-	-
- *Ophiogomphus*	x	x	x
Lepidoptera (Noctuidae?)	x	-	-
Corixidae			
Callicorixa audeni	x	x	xxx
Sigara spp (e.g. *S. lineata*, *S. bilineata*)	-	x	x
Hesperocorixa laevigata	-	-	x
H. atopodonta	-	-	x
Notonectidae			
Notonecta undulata	-	-	x
Coleoptera			
Elmidae	x	x	x
Dytiscidae	-	x	x
Chrysomelidae	x	-	-
Haliplidae	-	x	-
Diptera			
Chironomidae			
- Chironomini	xx	xx	xx
- Tanytarsini	x	x	x
- Orthocladiinae	xxx	xxx	xxx
- Tanypodiinae	x	x	x
- pupae	x	x	x
Ceratopogonidae	x	x	x
Tipulidae			
- *Erioptera*	-	-	x
- *Hexatoma*	x	x	x
- *Anotocha*	-	x	x
- *Limnophila*	-	x	x
- *Dicranota*	-	x	-
Ephydridae	-	-	x
Chaoboridae			
- *Chaoborus*	-	x	x
Tabanidae			
- *Tabanus*	x	-	x
Rhagionidae			
- *Atherix*	-	-	x
Empididae	x	x	x
Dolichopodidae	x	x	x

TABLE 2 List of Invertebrate Taxa found in samples from the Spring, Summer and Fall Survey Cont'd.

	SPRING	SUMMER	FALL
Simuliidae			
- *Simulium arcticum*	x	x	x
Tanyderidae	x	–	–
Misc. Adult Diptera	–	x	x
Aranea			
Acari	x	x	x
Aranea	x	x	x
Mollusca			
Physidae	x	x	x
Lymnaeidae	x	x	x
Planorbidae	x	–	x
Sphaeriidae			
- *Pisidium*	x	x	x
- *Sphaerium*	x	x	x
Ancylidae			
- *Ferrissia*	x	xx	xx

–	absent (from all sites and samples)
x	sporadic occurrence (occasionally found in certain sites, numbers are usually low)
xx	common (found in most sites, relatively abundant)
xxx	very common (found in virtually all sites and often very abundant)

Caddisflies of the family Hydropsychidae, especially _Hydropsyche_ and _Cheumatopsyche_, represented the major fraction of the total zoobenthos biomass at Vinca Bridge and Pakan Bridge. _Psychomyia_ and _Glossosoma_, also common caddisflies in the North Saskatchewan River, were usually less abundant than the two genera noted above.

Perlodidae and Chloroperlidae were the most commonly occurring stonefly families. Most Plecoptera nymphs designated as "unidentified" were members of one of these two families.

A number of taxa, which are not true components of the river benthos, which were present in the samples apparently incidentally rather than as a result of water quality, or which are uncommonly recorded in benthic surveys, occurred in the North Saskatchewan River samples. Abundance data for these taxa have not been included with the raw data in Part Three of this report. The occurrence of these taxa in the samples is discussed here briefly.

In the fall, very high numbers of Corixidae (i.e., estimated as high as 10,000 specimens per sample and consisting mostly of _Callicorixa audeni_, _Sigara lineata_ and _S. bilineata_) were present in right-bank samples from E. L. Smith. Somewhat lower numbers were present in left-bank samples from E. L. Smith as well as in samples from both banks at Pakan Bridge. Their presence in the samples was incidental rather than influenced by water quality and the huge population densities would have biased the results. Therefore, corixid numbers were excluded from the data analysis.

Amphipoda (*Hyalella azteca* and *Gammarus lacustris*) were found only in samples from the left-bank site at Sturgeon, the first site downstream of the confluence of the Sturgeon River with the North Saskatchewan River. Because the specimens were believed to have come from the tributary, occurrence data were excluded from the North Saskatchewan River data analysis.

Planktonic taxa such as calanoid and cyclopoid copepods, cladocera (e.g., *Daphnia* spp., *Bosmina longirostris*, *Ceriodaphnia* spp., *Acroperus harpae*, and *Pleuroxus procurvus*), and rotifera (e.g., *Lecane* spp., *Brachionus* spp., *Asplanchna* sp.) occurred in most samples. Zooplankton, normally part of the lentic communities of lakes ponds, and backwaters, can be carried from these standing waters into rivers, where their recurrence is considered incidental (Hynes 1972, Winner 1975). Because of the uncertainty of origin of North Saskatchewan River zooplankton, these data were omitted from further analysis.

A few taxa were encountered in only one or very few samples. These sporadic occurrences were not meaningful in terms of overall water quality assessment, but were of interest from a general point of view. *Ilyocryptus sordidus*, a truly benthic cladoceran, possesses red blood pigment and is particularly well adapted to an existence in muddy substrates; a few specimens were collected at Sturgeon, downstream of the confluence of the Sturgeon River with the North Saskatchewan River. Harpacticoida, copepods with benthic habits, occurred sporadically. A few taxa from the phyla Gastrotricha and Tardigrada were recorded.

Two specimens of the parasite Neoechynorhynchus, a member of the phylum Acanthocephala (identification, Dr. D.R. Mudry), were found in samples from Clover Bar and Sturgeon. These Acanthocephalans parasitize suckers and have arthropods (such as amphipods, ostracods, copepods, insect nymphs) as intermediate hosts. One specimen of a cestode belonging to the family Caryophillidae and having tubificids as the intermediate host (Mudry and Arai 1973) was found at Sturgeon. These parasites are rarely found free in the benthos, and their occurrence there is incidental.

3.2 Community Descriptors

The benthic invertebrate fauna of the North Saskatchewan River is diverse and rich. Numerical data which describe the various taxa from all sites sampled in the three seasons are complex. Although much information can be gathered from the analysis of frequency tables for individual taxa, the sheer volume of collected data makes this approach inefficient even when some non-benthic or other incidental species occurrences were eliminated from the data set. Instead, commonly used community parameters such as total number of taxa, total number of specimens per sample, total number of specimens per major taxon, and diversity were used to describe major community changes. Cluster analysis and principal component analysis permitted the grouping of sites with similar invertebrate communities. Additionally, principal component analysis offered an objective way of determining which taxa explain most of the variance in the data sets.

Tables 3 to 5 summarize means and standard errors for the main zoobenthic parameters (i.e., major taxonomic groups, total invertebrate density, Shannon-Wiener diversity, and total number of invertebrate taxa) in the three surveys. The first three parameters were useful descriptors of major trends in the zoobenthic community of the North Saskatchewan River between Devon and Pakan Bridge. There was a trend toward fewer taxa from Rossdale to Sturgeon, particularly at the right-bank site at Rundle Footbridge. However, the trend was inconsistent and its significance is unclear.

3.2.1 Total Numbers

The average total numbers per site for left-bank and right-bank sites in spring, summer, and fall are shown in Figures 2 to 7 and Tables 3 to 5. Total numbers showed a clear pattern in the river between Devon and Pakan Bridge. They were low for right-bank sites upstream of Edmonton and rarely exceeded 200 individuals per sample. A slight increase in numbers occurred at Rossdale (spring, fall), but the increase became more evident at 50th Street Footbridge (summer, fall). In all three seasonal data sets, the Rundle Footbridge right-bank site showed the most dramatic increase in density. At this site, numbers were one to two orders of magnitude higher than at corresponding upstream sites. It was also at the Rundle Footbridge right-bank site that the highest densities per sample were reported for the entire survey: an average of 26,861

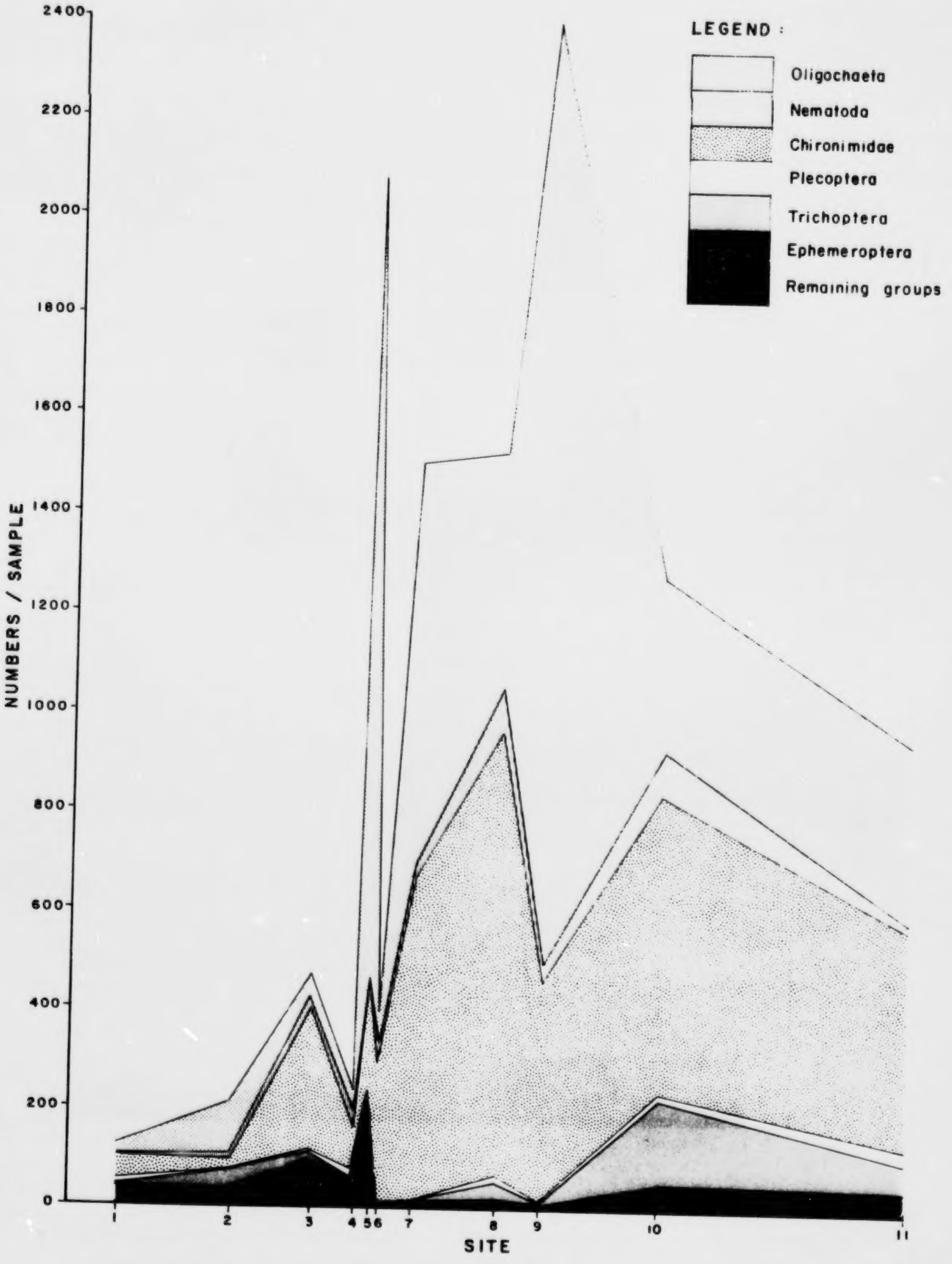

FIGURE 2 . SPRING RIGHT BANK : Total invertebrate density and density of major taxa . Refer to Table 1c for site labels.

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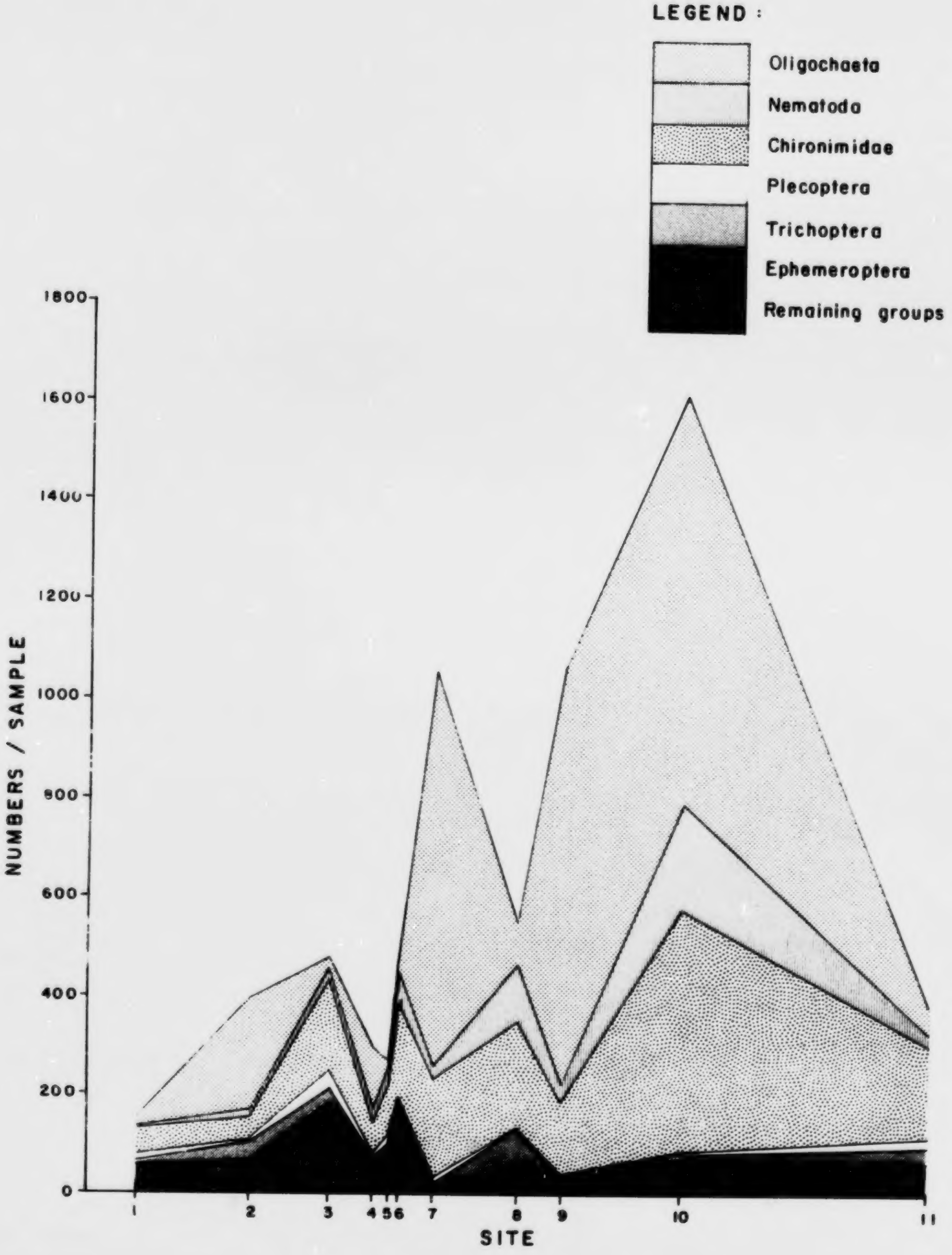

FIGURE 3 . SPRING LEFT BANK : Total invertebrate density and density of major taxa . Refer to Table 1c for site labels.

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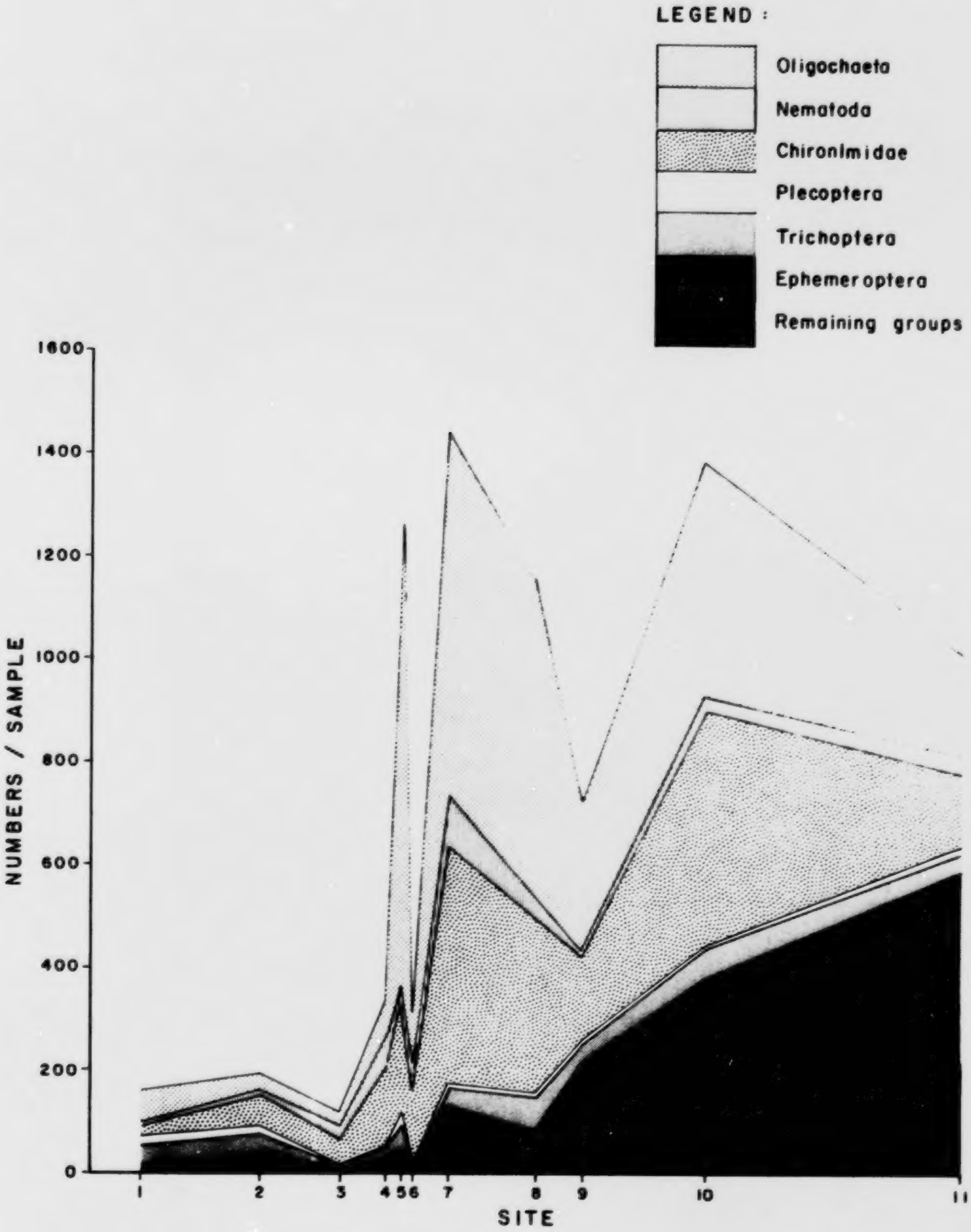

FIGURE 4 . SUMMER RIGHT BANK : Total invertebrate density and density of major taxa . Refer to Table 1c for site labels.

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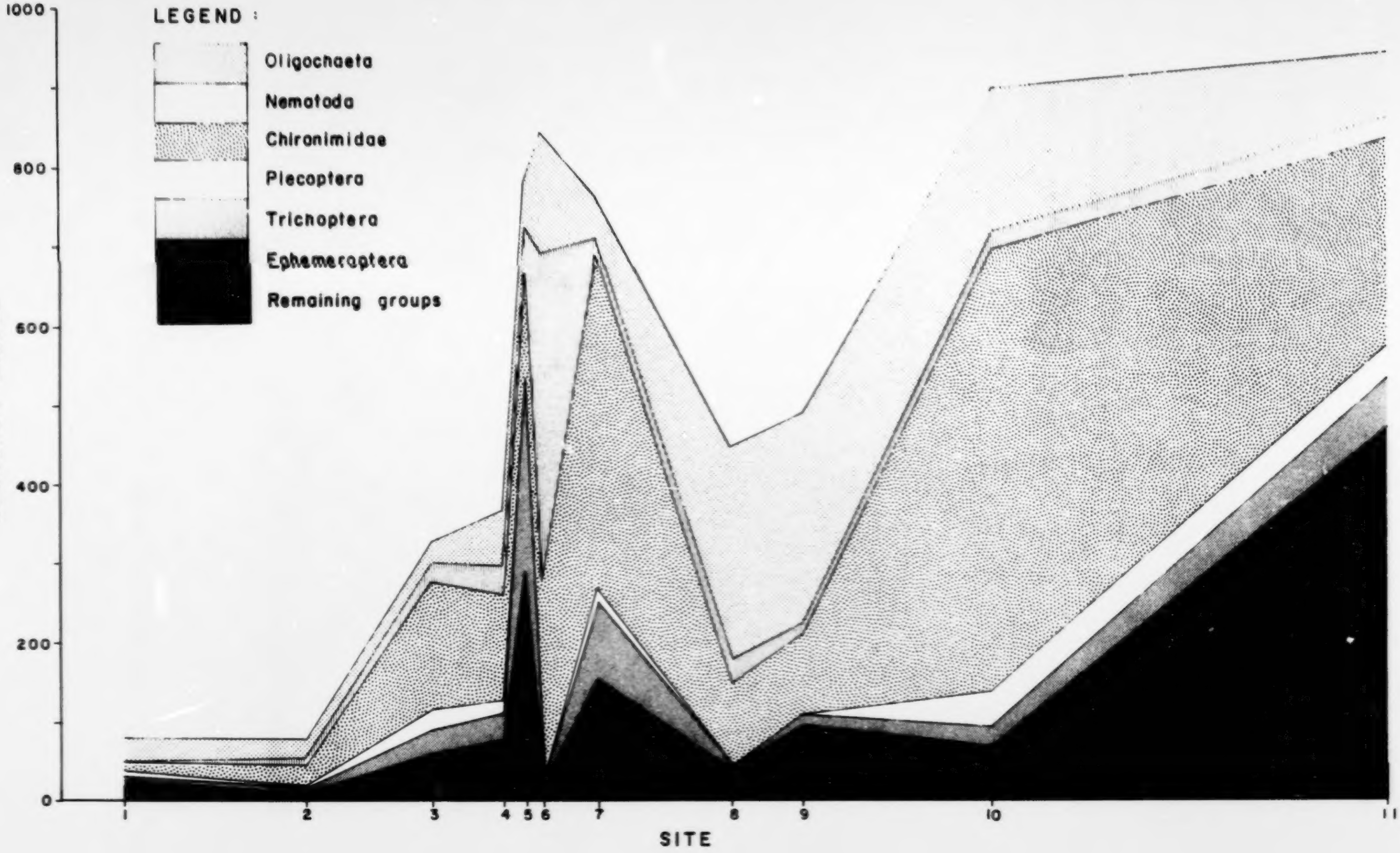

FIGURE 5 . SUMMER LEFT BANK : Total invertebrate density and density of major taxa.
Refer to Table 1c for site labels.

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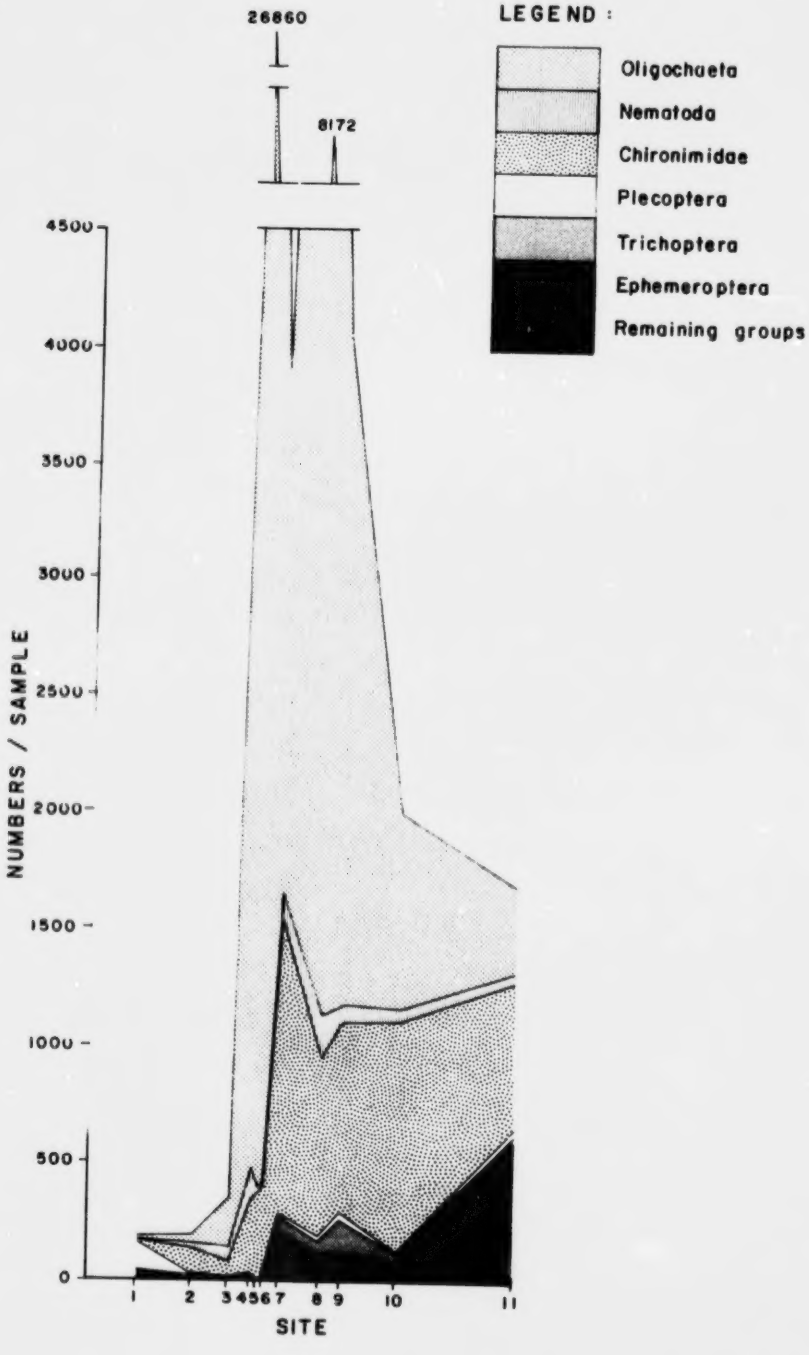

FIGURE 6 . FALL RIGHT BANK : Total invertebrate density and density of major taxa . Refer to Table 1c for site labels.

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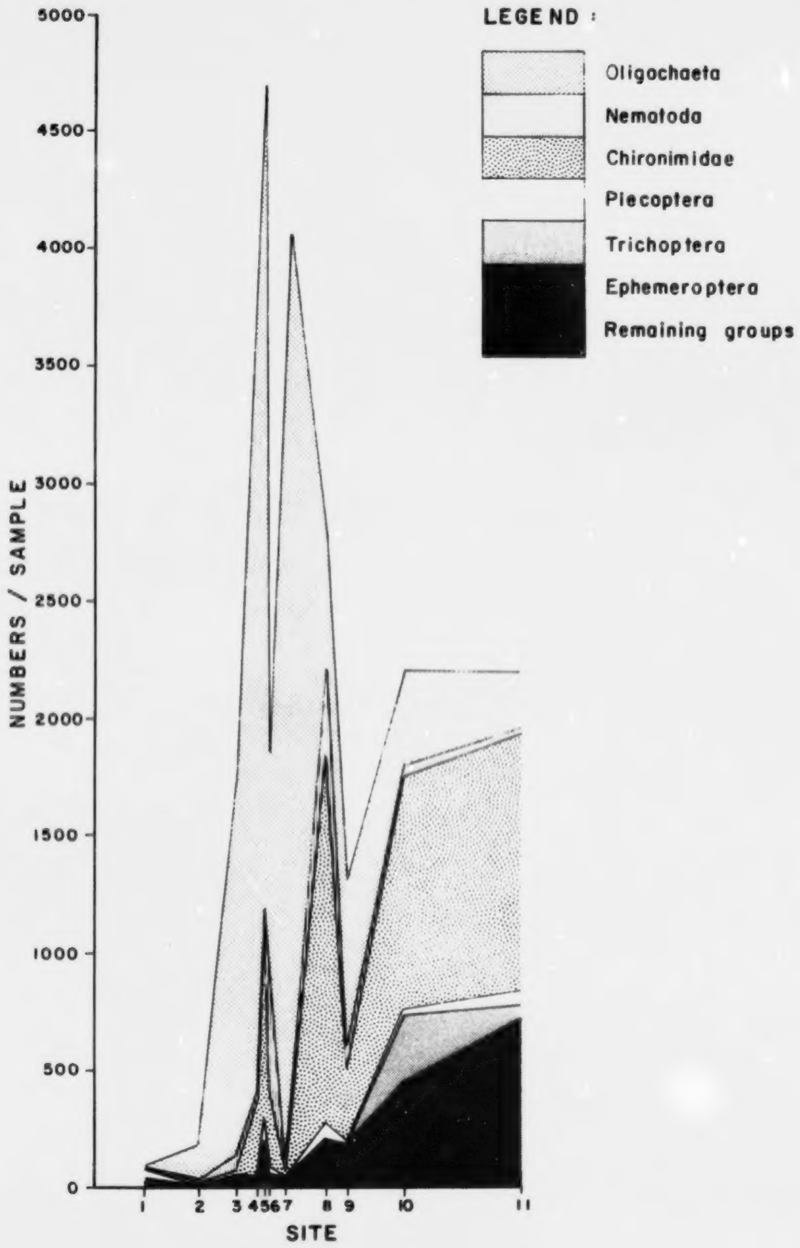

FIGURE 7 . FALL LEFT BANK : Total invertebrate density and density of major taxa . Refer to Table 1c for site labels

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Table 3. Spring 1982, mean and standard error of major zoobenthic parameters

	Ephemeroptera		Trichoptera		Plecoptera		Nematoda		Oligochaeta		Chironomidae		Total Numbers	
	$\bar{x}$ ±	SE	$\bar{x}$ ±	SE	$\bar{x}$ ±	SE	$\bar{x}$ ±	SE	$\bar{x}$ ±	SE	$\bar{x}$ ±	SE	$\bar{x}$ ±	SE
Devon R*	33.2	6.1	3.2	1.0	8.8	1.3	3.2	1.2	20.6	10.7	49.4	7.7	124.4	19.4
Devon L**	38.2	5.9	8.0	2.3	10.0	3.5	3.8	1.5	14.8	1.5	52.0	6.5	150.2	11.7
E.L. Smith R	26.6	4.4	35.6	4.5	2.0	.8	12.4	1.9	103.2	15.6	18.2	2.6	213.8	28.2
E.L. Smith L	46.8	8.4	33.0	11.2	3.6	1.0	12.4	5.3	229.2	27.6	44.2	2.8	391.6	41.9
Rossdale R	53.0	8.4	13.6	3.3	6.2	1.9	35.0	4.6	44.6	8.2	280.6	20.8	477.8	25.2
Rossdale L	141.2	39.7	25.2	7.1	44.6	14.7	23.8	8.4	36.6	12.3	199.8	44.5	478.6	117.7
50th Street R	55.4	11.2	6.8	2.2	11.2	3.1	34.6	9.3	32.0	5.2	85.0	11.2	233.8	25.3
50th Street L	53.6	13.7	4.0	1.8	2.3	1.1	32.8	4.9	121.4	17.3	61.2	5.5	292.4	28.2
Rundle R	108.8	20.8	12.8	5.0	21.6	8.6	5.6	3.5	1622.8	256.4	218.4	14.2	2078.8	270.9
Rundle L	67.0	13.2	2.0	.5	19.4	3.7	40.4	7.5	9.4	2.2	100.2	20.6	264.4	30.9
Beverly Bridge R	6.0	1.6	1.0	.6	1.0	.8	28.2	1.3	54.2	8.1	295.4	17.6	392.6	21.0
Beverly Bridge L	124.2	19.5	11.4	1.9	15.0	2.7	60.0	15.2	25.6	8.2	188.8	37.2	470.2	77.2
Cloverdale R	9.8	2.7	.4	.4	.2	.2	34.0	8.3	796.8	198.0	651.0	118.7	1503.8	250.9
Cloverdale L	11.2	4.9	.6	.4	3.4	1.4	28.2	13.8	802.0	199.6	201.4	31.9	1054.0	216.8
Ft. Sask. R.	18.6	3.2	32.4	11.6	17.0	3.4	82.4	28.4	470.4	86.9	898.4	84.9	1523.8	88.7
Ft. Sask. L.	46.4	14.0	66.0	24.0	5.4	2.3	115.0	36.5	82.8	20.3	212.6	40.0	546.4	42.6
Sturgeon R	1.8	0.6	.4	.2	3.0	2.1	35.2	12.9	1956.8	454.2	438.4	118.4	2446.0	510.1
Sturgeon L	13.2	7.4	1.2	.7	1.2	.4	35.2	6.3	851.2	292.4	126.2	43.3	1060.8	261.1
Vinca Bridge R	50.4	5.6	177.2	34.8	12.8	2.3	91.2	29.6	332.8	86.5	606.0	26.6	1278.6	101.5
Vinca Bridge L	56.4	6.1	16.2	4.1	5.8	2.6	215.4	37.7	815.8	167.7	489.6	81.9	1610.6	273.9
Pakan Bridge R	35.2	12.3	54.6	15.2	30.6	17.0	22.0	9.8	356.8	227.1	437.0	145.3	945.2	379.1
Pakan Bridge L	59.0	9.4	33.2	13.9	16.4	9.5	22.8	2.5	55.6	14.7	187.4	47.5	381.2	91.9

*R: right bank
**L: left bank

Table 4. Summer 1982, mean and standard error of major zoobenthic parameters

	Ephemeroptera		Trichoptera		Plecoptera		Nematoda		Oligochaeta		Chironomidae		Total Numbers		Total No Taxa		H	
	$\bar{x}$ ±	SE	$\bar{x}$ ±	SE	$\bar{x}$ ±	SE	$\bar{x}$ ±	SE	$\bar{x}$ ±	SE	$\bar{x}$ ±	SE	$\bar{x}$ ±	SE	$\bar{x}$ ±	SE	$\bar{x}$ ±	SE
Devon R*	1.5	1.1	39.0	5.8	14.4	2.2	12.0	3.0	56.0	8.6	19.8	4.9	161.8	18.9	21.6	0.7	3.656	0.057
Devon L**	6.6	1.3	5.0	1.8	5.0	0.7	2.8	1.3	27.8	6.7	13.2	2.0	79.4	5.9	16.0	.5	3.269	0.094
E.L. Smith R	20.0	4.7	41.2	4.8	13.4	2.8	3.6	3.1	30.0	6.0	59.4	6.1	195.0	25.2	25.2	1.5	4.100	0.083
E.L. Smith L	2.6	4.	8.8	6.6	1.6	0.5	8.4	2.0	28.6	10.2	24.4	3.7	77.4	18.6	13.8	1.2	3.091	0.139
Rossdale R	3.0	1.4	8.4	5.2	1.2	0.6	25.2	5.3	31.8	17.6	48.2	29.6	121.0	59.2	14.4	1.9	3.066	0.121
Rossdale L	46.0	8.7	30.2	4.3	25.8	4.6	21.8	3.4	31.6	7.8	159.0	12.3	327.2	33.0	26.8	.7	3.284	0.065
50th Street R	23.6	4.8	21.6	2.5	.8	0.6	65.8	5.0	61.2	11.27	150.0	16.9	332.8	30.8	23.8	.9	3.304	0.050
50th Street L	47.0	14.0	33.2	9.3	14.2	2.6	36.0	10.0	71.6	16.6	137.2	11.7	367.6	29.3	26.6	1.5	3.659	0.069
Rundle R	35.4	3.0	47.8	19.4	20.0	4.6	5.2	2.1	911.6	229.0	240.6	33.2	1262.8	286.1	18.2	1.4	1.900	0.031
Rundle L	276.2	218.4	223.2	180.3	15.6	4.9	42.4	7.2	94.6	20.2	114.2	14.5	783.2	403.3	28.0	1.2	3.400	0.321
Beverly Bridge R	0.6	.4	1.4	1.0	.0	0.0	20.8	5.3	71.0	13.5	161.6	33.6	257.2	48.6	11.2	1.0	2.440	0.100
Beverly Bridge L	11.4	3.0	4.6	1.8	1.6	0.9	417.6	86.4	164.8	24.5	236.0	26.8	841.6	107.5	16.4	1.3	2.278	0.169
Cloverdale R	114.4	21.6	30.6	2.3	3.4	1.5	98.2	11.7	725.0	135.6	463.2	66.0	1440.4	185.4	21.0	1.6	2.527	0.107
Cloverdale L	110.6	17.3	96.6	31.0	19.2	5.0	21.6	9.3	79.2	14.3	420.4	53.5	767.4	65.1	24.8	1.1	2.872	0.103
Ft. Sask. R	186.6	122.4	64.8	31.7	2.8	1.4	44.8	11.1	588.2	185.8	247.6	25.6	1150.6	131.8	24.0	1.8	2.631	0.246
Ft. Sask. L	10.4	1.6	3.6	1.2	0.2	0.2	28.2	9.7	271.0	50.4	104.2	10.5	425.0	6.10	17.2	1.3	2.484	0.138
Sturgeon R	167.8	47.6	36.8	7.6	3.0	1.8	10.2	1.2	325.4	10.8	163.21	16.6	721.8	59.8	24.2	1.3	2.911	0.094
Sturgeon L	43.8	12.8	17.6	4.2	.2	0.2	11.2	4.6	251.6	17.5	98.0	6.1	458.4	27.8	25.0	1.9	3.127	0.228
Vinca Bridge R	361.0	41.5	56.8	17.9	4.6	2.1	29.0	5.4	464.6	47.5	459.2	44.3	1384.2	92.7	24.0	.5	2.835	0.065
Vinca Bridge L	38.4	2.2	24.8	5.1	2.4	0.7	23.4	32.8	185.0	34.1	556.2	51.3	853.2	73.9	22.8	.9	2.702	0.073
Pakan Bridge R	371.8	41.4	35.4	6.1	9.8	2.4	38.2	12.2	186.4	27.5	155.8	13.7	1012.8	48.9	25.4	.2	3.373	0.110
Pakan Bridge L	426.0	79.6	63.6	22.0	43.0	18.4	22.4	5.5	85.8	4.3	261.8	34.5	944.8	126.7	27.0	2.0	3.532	0.117

*R: right bank
**L: left bank

Table 5. Fall 1982, mean and standard error of major zoobenthic parameters

	Ephemeroptera		Trichoptera		Plecoptera		Nematoda		Oligochaeta		Chironomidae		Total Numbers	
	$\overline{x}$ ±	SE	$\overline{x}$ ±	SE	$\overline{x}$ ±	SE	$\overline{x}$ ±	SE	$\overline{x}$ ±	SE	$\overline{x}$ ±	SE	$\overline{x}$ ±	SE
Devon R*	28.8	14.4	6.0	0.9	112.4	22.1	3.2	1.0	11.8	3.2	12.8	3.7	218.2	45.7
Devon L**	16.6	2.1	2.4	0.9	27.0	3.2	.8	0.2	10.2	3.3	8.4	1.9	90.4	4.0
E.L. Smith R.	.8	0.2	0.2	0.2	3.6	2.0	21.6	5.3	30.8	4.7	113.6	25.5	184.2	4.3
E.L. Smith L.	.0	0.0	0.2	0.2	0.8	0.5	14.2	3.0	144.4	29.4	7.8	2.0	179.8	33.7
Rossdale R	1.4	0.5	0.0	0.0	1.6	0.4	64.4	12.6	205.4	37.9	66.4	7.5	349.2	56.5
Rossdale L	.2	0.2	0.4	0.2	0.2	0.2	68.8	20.5	1589.0	262.4	19.2	7.6	1724.2	266.3
50th Street R	16.0	7.8	0.4	0.2	1.0	0.3	136.8	9.1	3851.6	492.3	328.2	65.4	4349.6	485.9
50th Street L	3.4	1.0	0.4	0.2	1.2	0.2	36.8	6.6	4304.8	749.2	312.0	81.6	4694.4	817.9
Rundle R	.8	0.6	0.2	0.2	0.6	0.4	18.8	4.4	26470.4	4000.8	364.2	128.3	26861.0	3984.3
Rundle L	104.6	11.3	2.2	1.0	72.4	5.0	87..2	7.9	2832.8	204.8	824.4	75.2	4036.8	265.9
Beverly Bridge R	5.0	1.0	.2	0.2	0.4	0.2	30.4	4.7	7876.8	558.8	375.8	40.6	8308.2	576.4
Beverly Bridge L	27.2	13.5	1.6	1.4	11.2	3.4	44.8	6.5	1418.4	247.1	332.0	54.4	1871.0	268.6
Cloverdale R	75.2	26.4	66.8	21.5	6.6	2.1	102.4	24.0	2202.8	411.5	1260.6	192.7	3876.6	424.1
Cloverdale L	.8	0.6	.4	0.4	0.2	0.2	23.2	4.6	3999.2	680.1	19.2	5.0	4074.4	690.5
Ft. Sask. R	72.6	28.1	51.4	20.0	15.2	4.8	181.6	36.5	7040.0	2154.4	760.0	162.4	8379.2	1947.7
Ft. Sask. L	106.2	37.2	4.6	1.2	9.8	3.7	72.3	72.3	558.4	181.1	1577.0	223.2	2800.2	435.8
Sturgeon R	88.4	21.4	131.6	33.2	8.8	2.2	77.6	17.0	2864.0	1246.0	806.4	96.4	4143.2	1146.5
Sturgeon L	42.2	24.9	8.4	3.7	4.8	2.1	79.2	10.2	719.2	140.1	312.4	54.8	1369.8	211.1
Vinca Bridge R	73.8	6.7	35.8	7.0	0.8	0.2	51.6	11.2	836.8	48.0	977.4	55.6	2005.0	70.3
Vinca Bridge L	434.8	57.3	286.2	69.4	2.0	44.0	2.7	2.7	406.4	111.9	993.2	118.9	2517.4	71.0
Pakan Bridge R	568.8	156.7	31.2	11.2	27.2	8.2	40.8	16.1	361.6	75.5	622.4	99.2	1679.0	263.9
Pakan Bridge L	646.4	149.2	64.8	30.8	58.4	17.3	31.2	9.1	251.2	33.5	1096.8	92.9	2288.4	190.0

*R: right bank
**L: left bank

specimens per sample in the fall. Densities remained high for all right-bank sites downstream of Rundle Footbridge except Beverly Bridge, where lower numbers occurred in spring and summer. There was a slight decline in average densities per site at Pakan Bridge.

The trend for left-bank sites was similar to that observed for the right-bank sites. Although increases in numbers per sample were less pronounced for left-bank sites, the changes were evident somewhat further upstream (i.e., at Rossdale). The highest total numbers for left-bank sites (4,800 specimens per sample at 50th Street) were also encountered in the fall.

3.2.2 Number of Individuals Per Major Taxon

The distribution of numbers among taxa is presented in Figures 2 to 7; basic statistics for individual parameters are given in Tables 3 to 5.

A progressive change was evident in the community composition from upstream sites to downstream sites. Chironomidae, Oligochaeta and Nematoda commonly represented about half of total numbers at Devon; the other half was composed mainly of Plecoptera, Ephemeroptera, Trichoptera, and a variety of taxa included as "remaining groups". In downstream direction and within the city limits, the number of chironomids, nematodes and especially oligochaetes often increased dramatically. These three groups represented up to 98% of the total numbers. Consequently, the percentage of mayflies, stoneflies and caddisflies was less than 5%, particularly at right-bank sites, even though the actual numbers for these three groups were usually slightly higher than at Devon. Further downstream, a second major change occurred when numbers of stoneflies, mayflies, caddisflies, and "remaining groups" showed much larger increases. However, numbers of chironomids, oligochaetes and nematodes also remained high. The ratios of numbers for major taxa to total numbers were comparable for Devon and Pakan Bridge, even though actual numbers were more than an order of magnitude greater at Pakan Bridge.

The locations at which these shifts in community composition occurred varied from left bank to right bank, and from one sampling period to another. In general the number of Chironomidae, Oligochaeta, and Nematoda increased downstream from Rossdale at left-bank sites, and increased downstream from 50th Street Footbridge at right-bank sites. The increase in Ephemeroptera, Plecoptera, and Trichoptera numbers was evident as far upstream as Clover Bar for left-bank sites; at right-bank sites, these numbers did not increase appreciably before Vinca Bridge.

3.2.3 Shannon-Wiener Diversity

Figure 8 summarizes average values for the Shannon-Wiener diversity index for left-bank and right-bank sites for the three sampling periods. Basic statistics for this parameter are given in Tables 3 to 5.

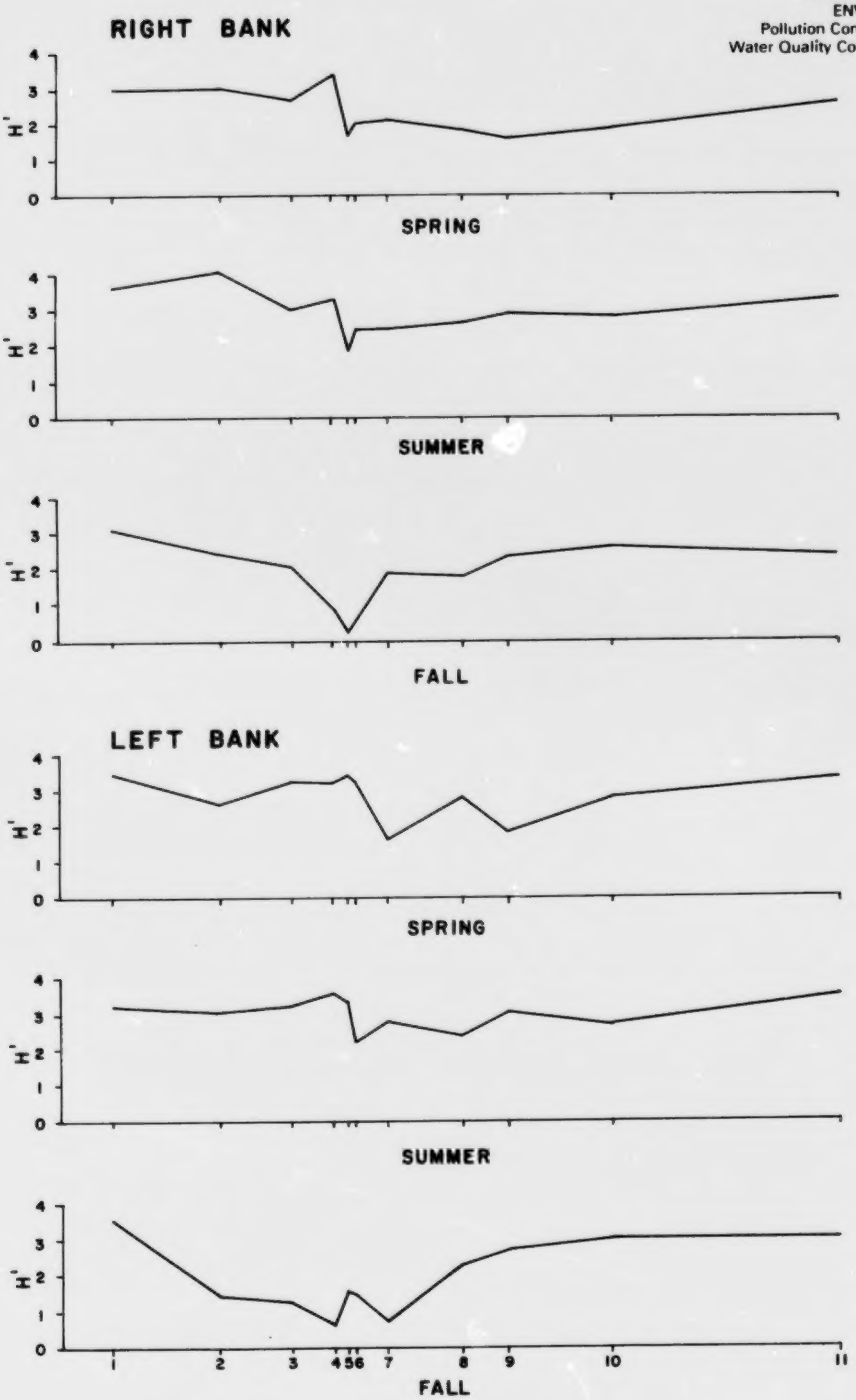


FIGURE 8 . SHANNON-WIENER DIVERSITY (H') .

Refer to Table 1c for site labels.

Diversity values calculated for the benthic invertebrate community of the North Saskatchewan River between Devon and Pakan Bridge ranged from a maximum of 4.100 at E.L. Smith (summer, right-bank site) to a minimum of 0.234 at Rundle Footbridge (fall, right-bank site). The patterns exhibited by the Shannon-Wiener diversity index in downstream direction were similar for all three data sets, although variations were more pronounced in the fall.

Right-bank sites upstream of Edmonton had the highest diversity values. H' declined gradually in downstream direction, and lowest values occurred at Rundle Footbridge. Values for H' remained low between Rundle Footbridge and Sturgeon in the spring, whereas a gradual increase in H' occurred from Rundle Footbridge downstream in summer and fall. Diversity values for the most downstream right-bank sites (Vinca Bridge and Pakan Bridge) were comparable to the values for Devon or E.L. Smith in the corresponding seasons.

For left-bank sites, diversity remained fairly stable in downstream direction until Beverly Bridge in spring or Rundle Footbridge in summer. Lowest H' values for these seasons occurred at the next downstream site in each case (i.e., Clover Bar and Beverly Bridge, respectively). Downstream of the latter two sites, diversity values increased irregularly. The pattern for the fall differed from those for spring and summer by the sudden drop in diversity at E.L. Smith and the persistence of low values until Clover Bar. Similar to right-bank sites, the diversity values for the most downstream left-bank sites were comparable to the values for Devon.

3.3 Multivariate Analyses

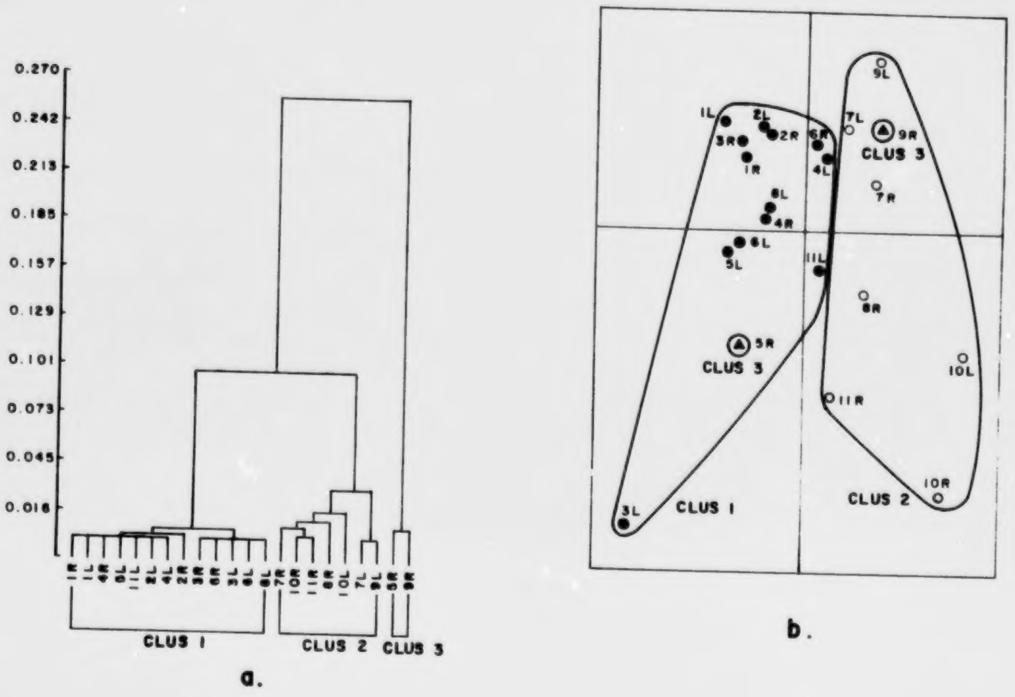
3.3.1 Cluster Analysis

The results of cluster analyses are presented as dendrograms in Figures 9, 10, and 11 for spring, summer, and fall, respectively.

The cluster analysis of spring data identified 3 major clusters. The first cluster (clus-1) grouped all sites from Devon to 50th Street Footbridge, the left-bank site at Rundle Footbridge, all sites at Fort Saskatchewan and Pakan Bridge, and both sites at Beverly Bridge. Clus-2 grouped both sites at Clover Bar, both sites at Vinca Bridge, the right-bank site at Fort Saskatchewan, and the left-bank site at Sturgeon. Clus-3 grouped the right-bank sites at Rundle and Sturgeon.

The cluster analysis of the summer data identified only two clusters. Clus-1 grouped all sites except the Sturgeon left-bank site, which constituted clus-2.

Three major clusters were identified by the analysis of the fall data set. Clus-1 and clus-2 resulted from the fusion of several sub-clusters. The differences in similarity coefficients at the fusion points of these sub-clusters were too small to be significant. However, for reasons which will become apparent later (results of principal component analysis), clus-1 was divided into clus-1a, comprised of sites upstream of Edmonton, and clus-1b, comprised of all sites downstream of Edmonton (i.e., downstream of sites in clus-2 and clus-3). Specifically, clus-1a grouped both sites at Devon, both



a. Cluster analysis.

b. Principal component analysis :
site groups are those identified in spring cluster analysis.

Refer to Table 1c for site labels.

FIGURE 9. MULTIVARIATE ANALYSIS OF ZOOBENTHIC DATA FROM SPRING 1982

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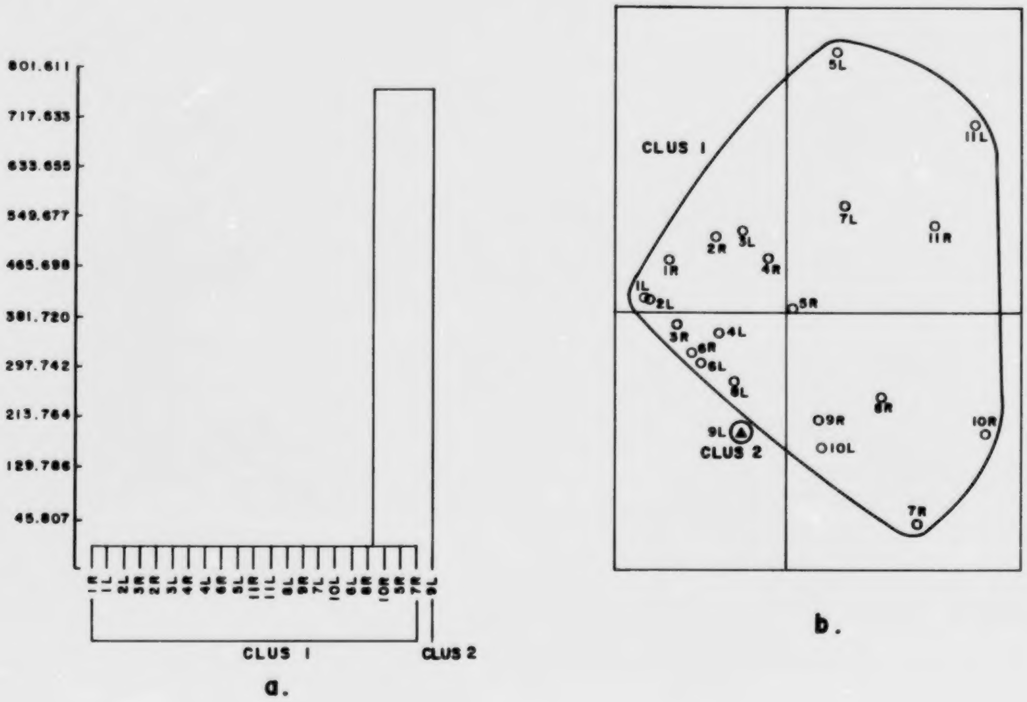

a.

b.

a. Cluster analysis.

b. Principal component analysis :
site groups are those identified in summer cluster analysis.

Refer to Table 1c for site labels.

FIGURE 10. MULTIVARIATE ANALYSIS OF ZOOBENTHIC DATA FROM SUMMER 1982

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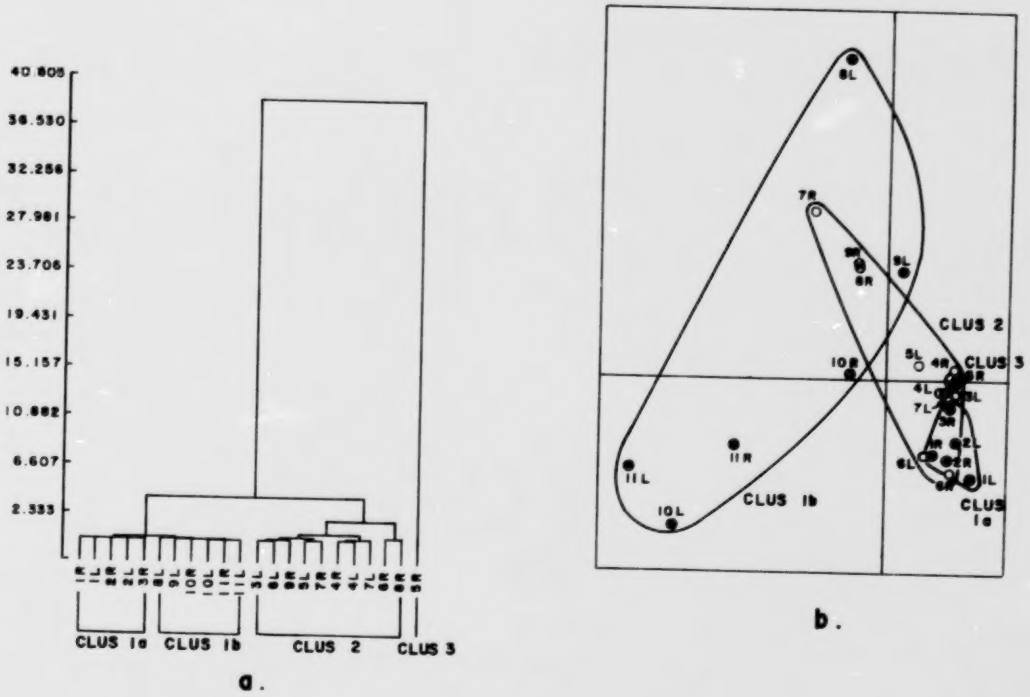

a. Cluster analysis.

b. Principal component analysis:
site groups are those identified in fall cluster analysis.

Refer to Table 1c for site labels.

FIGURE 11. MULTIVARIATE ANALYSIS OF ZOOBENTHIC DATA FROM FALL 1982

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sites at E.L. Smith, and the right-bank site at Rossdale; clus-1b grouped both sites at Vinca Bridge, both sites at Pakan Bridge, and the left-bank sites at Fort Saskatchewan and Sturgeon; clus-2 grouped all sites from 50th Street Footbridge to Clover Bar, the left-bank site at Rossdale, and the right-bank site at Sturgeon; clus-3 consisted of the right-bank site at Rundle Footbridge.

3.3.2 Principal Component Analysis

The eigenvalues[1] and percentage variance explained by each principal component in the analysis of spring, summer, and fall data are given in Table 6. The first two principal components explained the largest proportion of the sample variance. Because the third principal component also explained a considerable fraction of the variance, it was included in the analysis.

Taxa which accounted for most of the variance in each principal component are listed in Table 7; the eigenvector values are also given.

3.3.3 Major Characteristics of the Taxa identified by Principal Component Analysis

An appraisal of the list of taxa identified by PCA as being the most critical in the data set (Table 7) showed that a total of 31 different taxa had high eigenvector[1] values in the data sets for the three sampling seasons. Some of these taxa (i.e., Tricorythodes,

[1] See Section 2.4.1 of Methods for Definitions

TABLE 6 Eigen values and percentage variance explained by each eigenvector for Spring, Summer, and Fall data.

SPRING Eigen Values											
5.96	4.16	3.11	2.36	1.99	1.74	1.48	1.29	1.13	0.87	0.85	0.64
0.37	0.35	0.24	0.14	0.12	0.10	0.06	0.04	0.01	0.00	0.00	0.00
0.00	-0.00	-0.00	-0.00								
Percentage Variance											
21.27	14.87	11.10	8.41	7.11	6.22	5.27	4.53	4.04	3.10	3.05	2.29
1.34	1.24	0.86	0.50	0.43	0.34	0.22	0.13	0.03	0.00	0.00	0.00
0.00	-0.00	-0.00	-0.00								
SUMMER Eigen Values											
6.11	4.62	2.99	2.02	1.68	1.53	1.33	1.08	0.87	0.84	0.57	0.38
0.28	0.26	0.20	0.14	0.07	0.02	0.01	0.00	0.00	0.00	0.00	0.00
0.00											
Percentage Variance											
24.43	18.50	11.97	8.07	6.71	6.10	5.34	4.33	3.47	3.37	2.30	1.51
1.11	1.05	0.78	0.57	0.26	0.07	0.03	0.02	0.01	0.00	0.00	0.00
0.00											
FALL Eigen Values											
8.01	4.28	3.08	2.51	1.99	1.53	1.44	1.19	0.96	0.87	0.61	0.45
0.36	0.28	0.25	0.11	0.04	0.01	0.01	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00							
Percentage Variance											
27.62	14.75	10.63	3.66	6.88	5.29	4.38	4.09	3.31	3.01	2.10	1.54
1.26	0.96	0.86	0.39	0.12	0.05	0.03	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00							

TABLE 7. List of taxa which have high positive or negative scores for first three vectors

VECTOR 1	VECTOR 2	VECTOR 3
Spring 21% (*)	Spring 15% (*)	Spring 11% (*)
Chironomini 0.328 Tubificidae 0.272 Mermithoidea 0.241 Tanypodinae 0.238 Tricorythodes 0.238 Psychomyia 0.222 Ferrissia 0.217 Baetis -0.300 Alloperla -0.296 Rhithrogena -0.287 Heptageniidae -0.242	Tanytarsini 0.194 Ceratopogonidae 0.111 Isoperla -0.392 Chironomid pupae -0.347 Tanypodinae -0.299 Hydropsychidae -0.273 Psychomyia -0.265	Naididae 0.337 Turbellaria 0.311 Chironomid pupae 0.298 Tubificidae 0.218 Acari -0.365 Enchytraeidae -0.318 Glossosoma -0.302 Nematoda -0.278
Summer 21% (*)	Summer 19% (*)	Summer 12% (*)
Tricorythodes 0.339 Tanpodinae 0.297 Heptageniidae 0.296 Pseudocleon 0.280 Orthocladiinae 0.280 Enchytraeidae -0.247	Unid. Plecoptera 0.329 Ephemeroptera Nymphules 0.304 Centroptilum 0.296 Acari 0.248 Ferrissia -0.269 Chironomid pupae -0.250 Tubificidae -0.226 Tanypodinae -0.224	Hycropsychidae 0.462 Orthocladiinae 0.318 Chironomid pupae 0.321 Naididae 0.310 Tubificidae -0.292 Psychomyia -0.257 Tricorythodes -0.217
Fall 28% (*)	Fall 15% (*)	Fall 11% (*)
Enchytraeidae 0.200 Tricorythodes -0.310 Heptagenia -0.310 Isoperla -0.303	Enchytraeidae 0.194 Psychomyia 0.279 Mermithoidea -0.397 Capniidae -0.384 Ferrissia -0.380 Orthocladiinae -0.331	Elmidae 0.445 Caenis 0.444 Tanytarsini 0.292 Tubificidae 0.187 Enchytraeidae -0.231 Chloroperlidae -0.293 Rhithrogena -0.322

(*) indicates the variance explained by each individual vector.

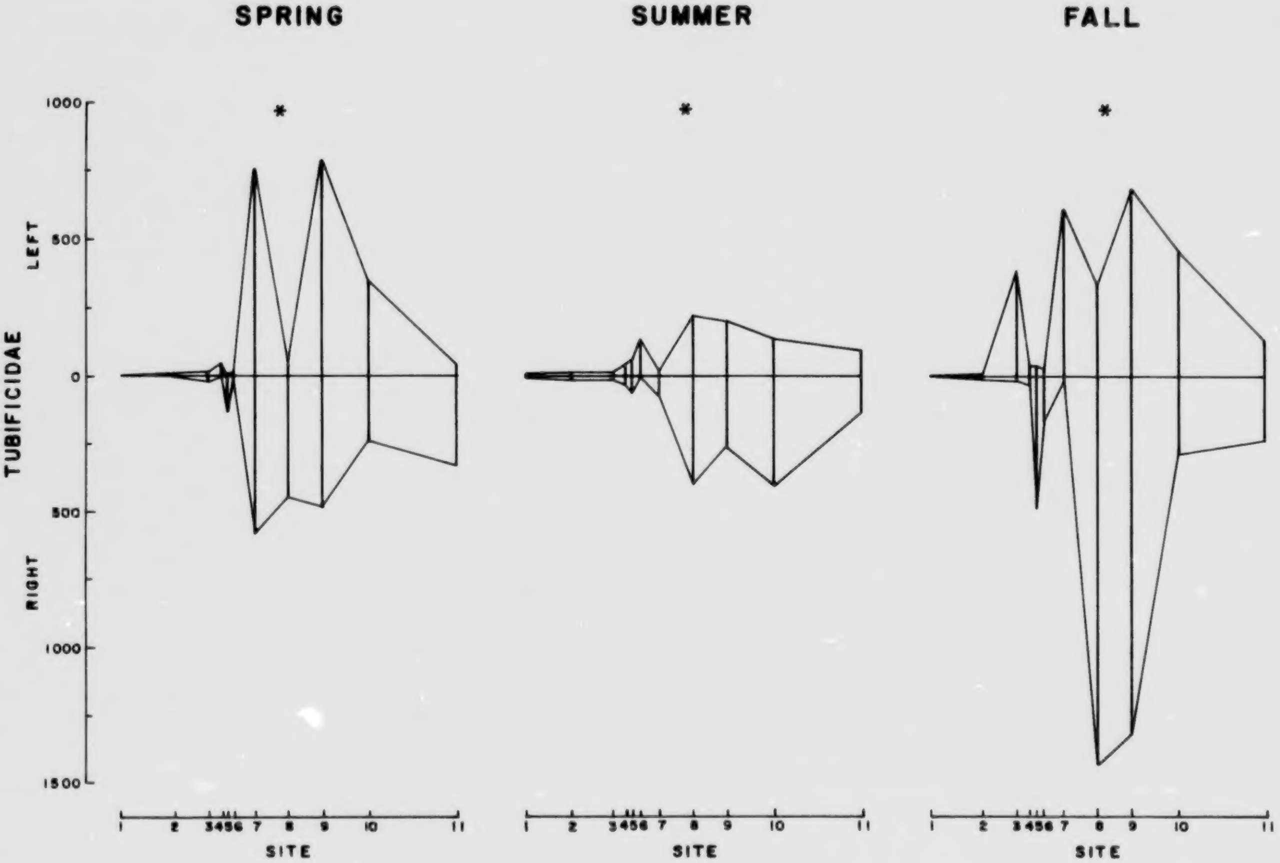
Ferrissia, *Psychomyia*, Enchytraeidae, and Tubificidae) explained a large portion of the variance in all three data sets; some taxa accounted for a large fraction of the variance in two data sets (i.e., *Rhithrogena*, Heptageniidae, Hydropsychidae, *Isoperla*, Tanytarsini, Tanypodinae, Orthocladiinae, Chironomidae pupae, Naididae, Mermithoidea, and Acari). The remaining taxa explained a large portion of the variance in only one data set (i.e., *Baetis*, *Caenis*, *Centroptilum*, *Heptagenia*, *Pseudocleon*, Ephemeroptera nymphules, *Glossosoma*, *Alloperla*, Capniidae, Chloroperlidae, undetermined Plecoptera, Ceratopogonidae, Chironomini, Nematoda, and Elmidae).

In general, benthic invertebrates will show one of three responses to effluent discharge, depending on the nature of the discharge:

- a positive response (i.e., numbers increase downstream of the discharge)
- a negative response (i.e., numbers decrease downstream of the discharge)
- no change (i.e., no change in numbers downstream of the discharge)

A further distinction can be made in the first 2 types of response between taxa which show a gradual response and those which show a sudden, though possibly short-lived, response. The densities of taxa illustrating each type of response in the North Saskatchewan River are shown in Fig. 12.

Most taxa showed a gradual, positive response. Three of the five taxa identified in spring, summer, and fall by principal component analysis were the most typical examples of this type of response. *Tricorythodes*, *Ferrissia*, and *Psychomyia* were present at



* Indicates the season in which a taxon explains a large fraction of the sample variance .

FIGURE 12 . TAXA SHOWING CHARACTERISTIC DENSITY CHANGES IN THE NORTH SASKATCHEWAN RIVER IN THE VICINITY OF EDMONTON .

Refer to Table 1c for site labels.

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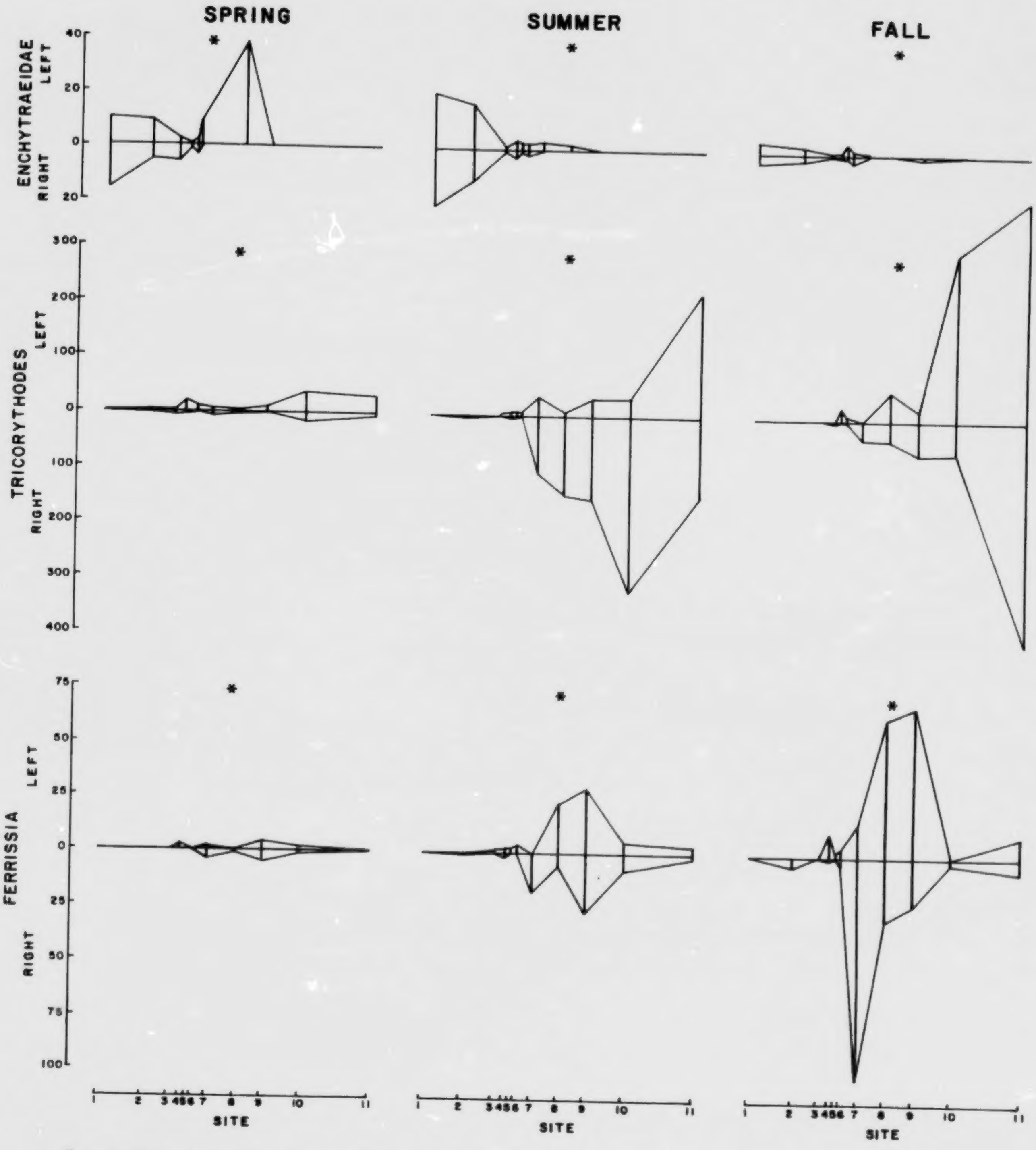

* Indicates the season in which a taxon explains a large fraction of the sample variance .

FIGURE 12 Continued .

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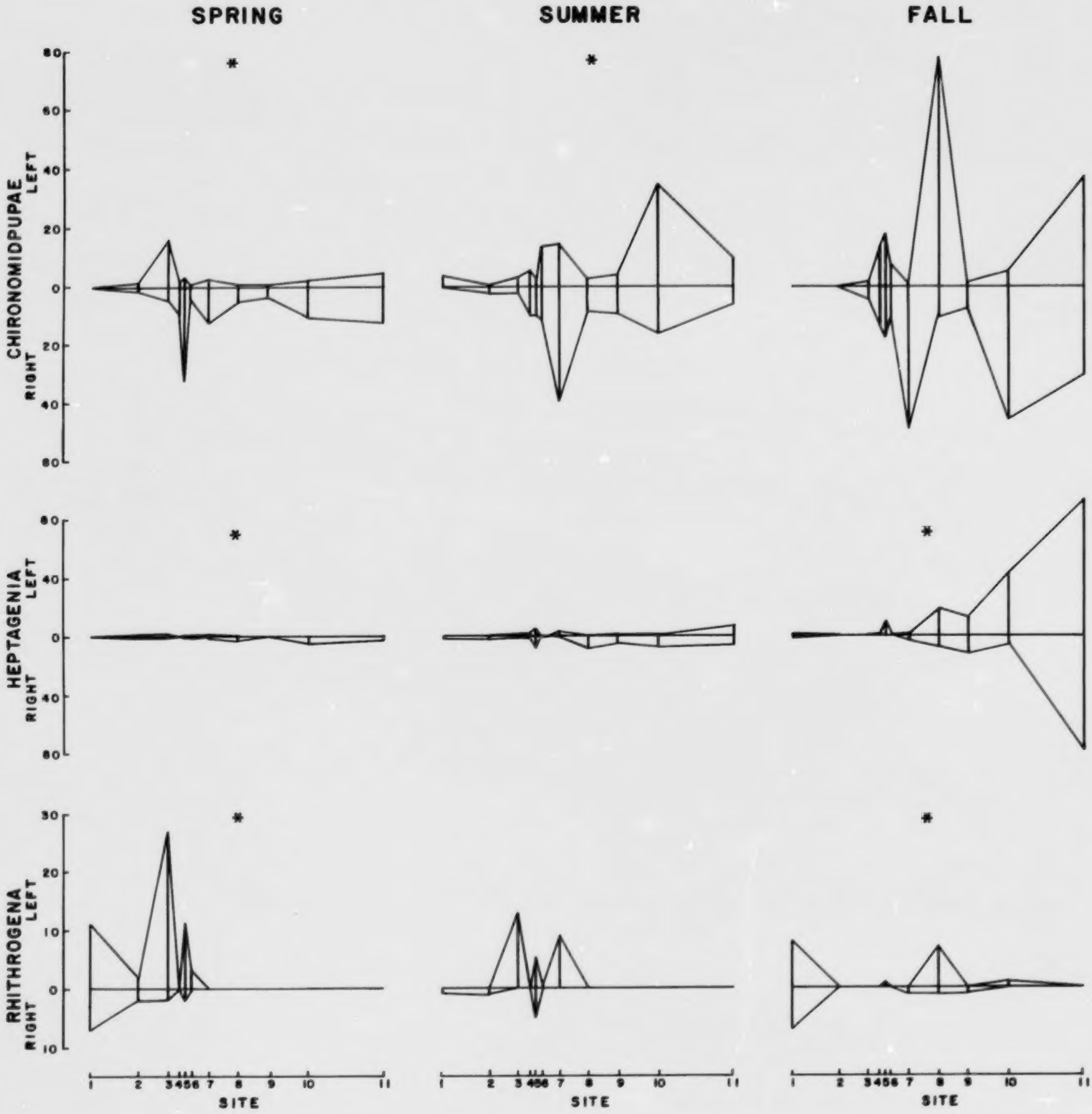

* Indicates the season in which a taxon explains a large fraction of the sample variance .

FIGURE 12 Continued .

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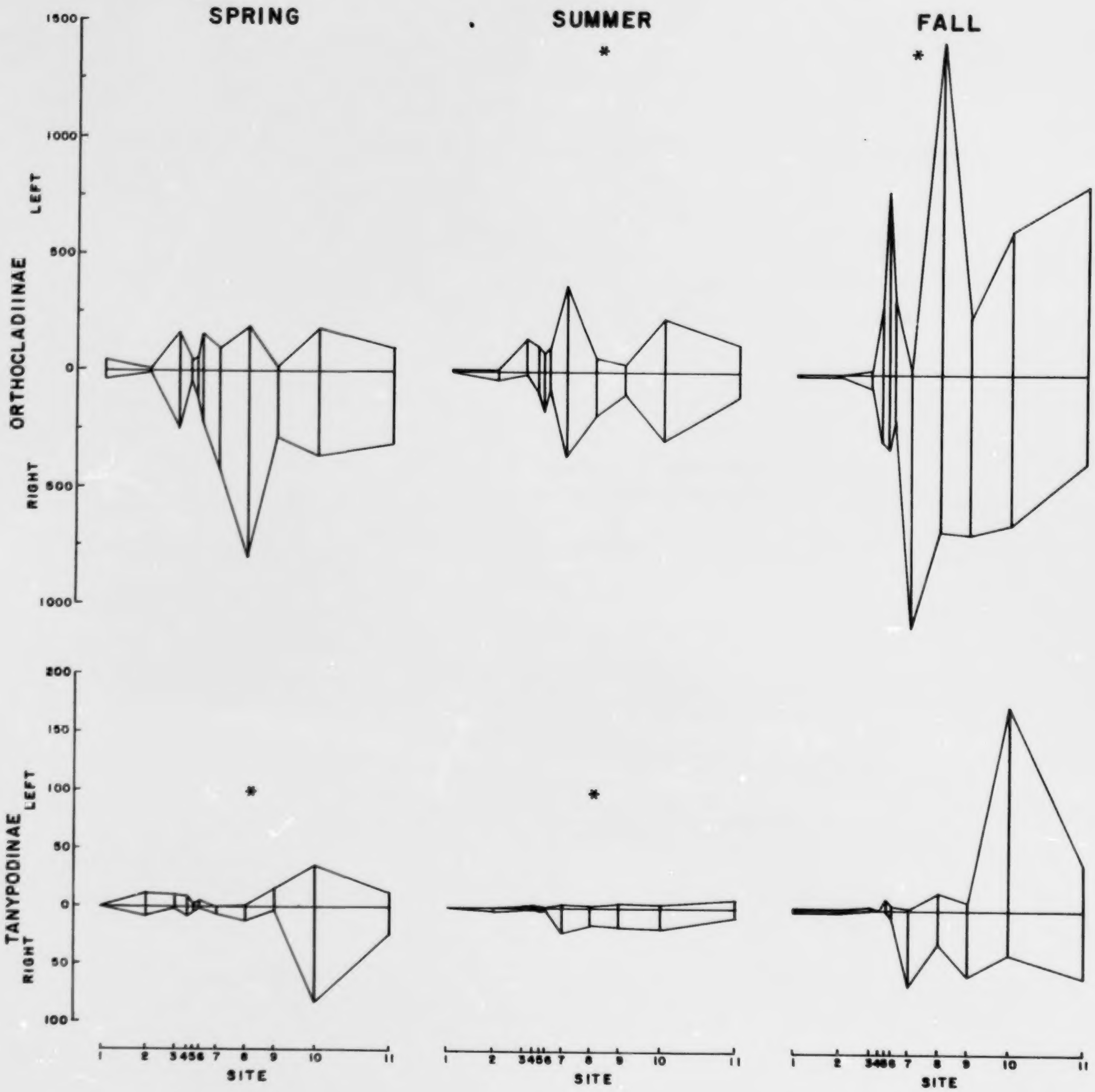

* Indicates the season in which a taxon explains a large fraction of the sample variance .

FIGURE 12 Continued .

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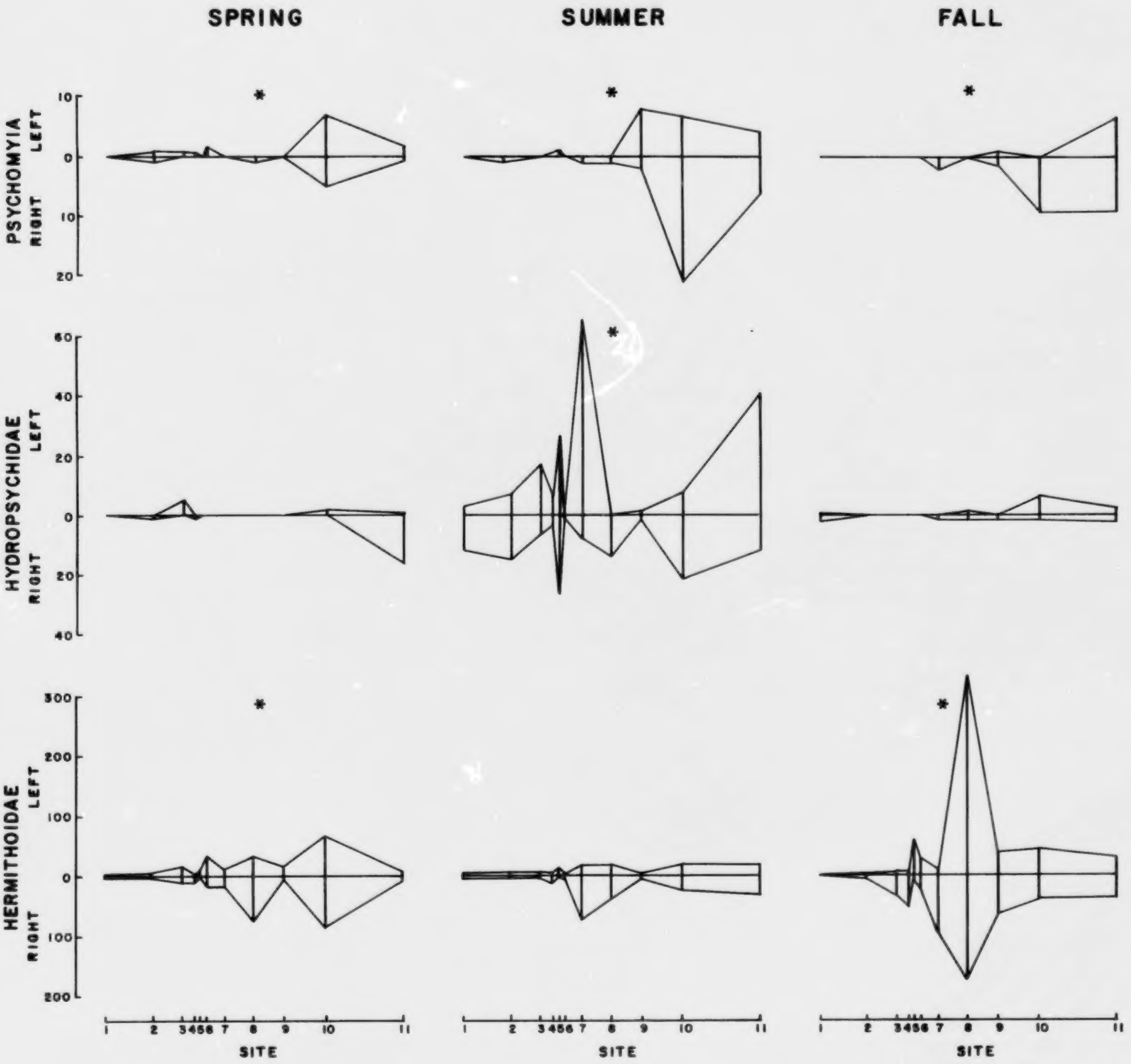

* Indicates the season in which a taxon explains a large fraction of the sample variance .

FIGURE 12 Continued .

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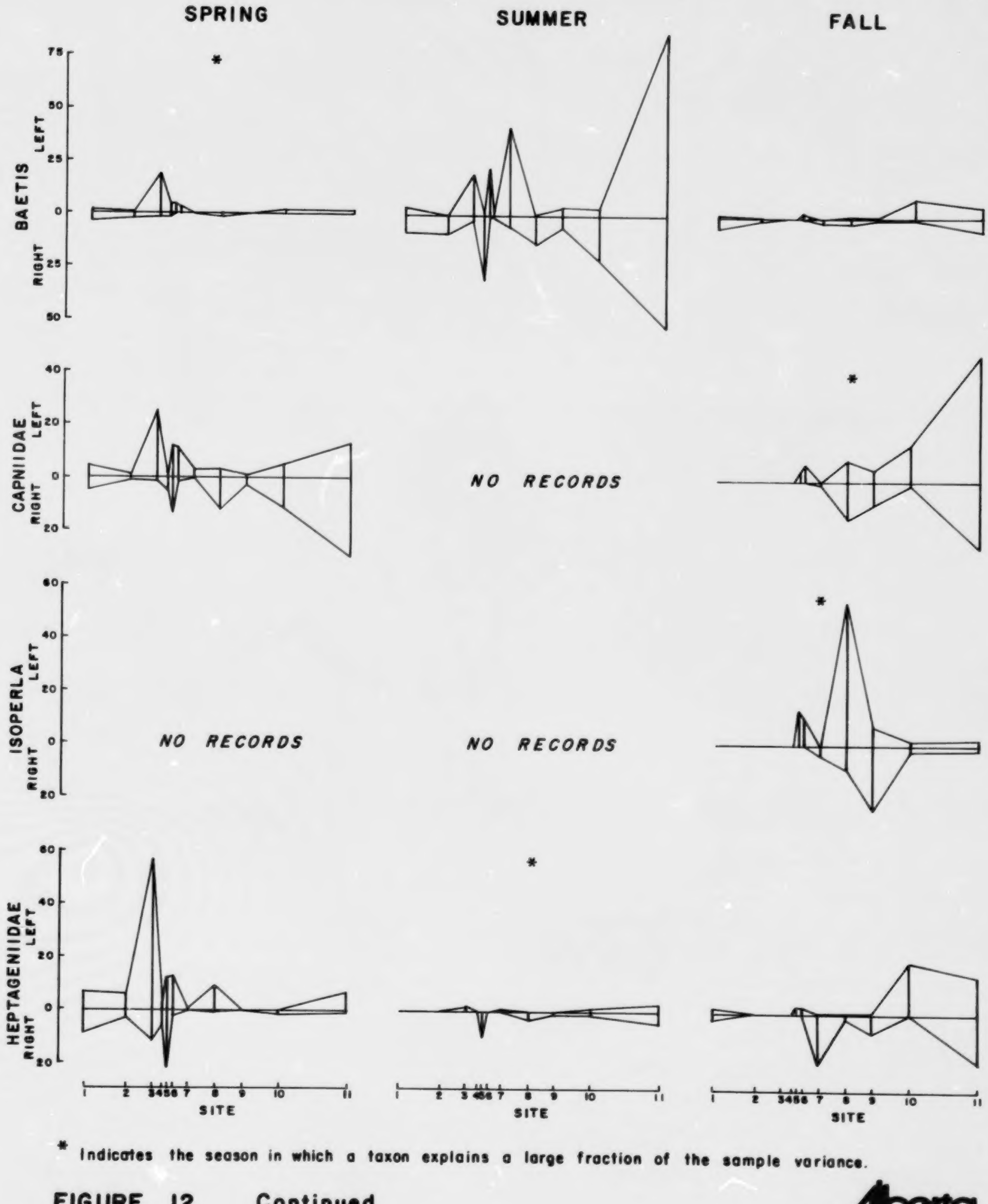

* Indicates the season in which a taxon explains a large fraction of the sample variance.

FIGURE 12 Continued

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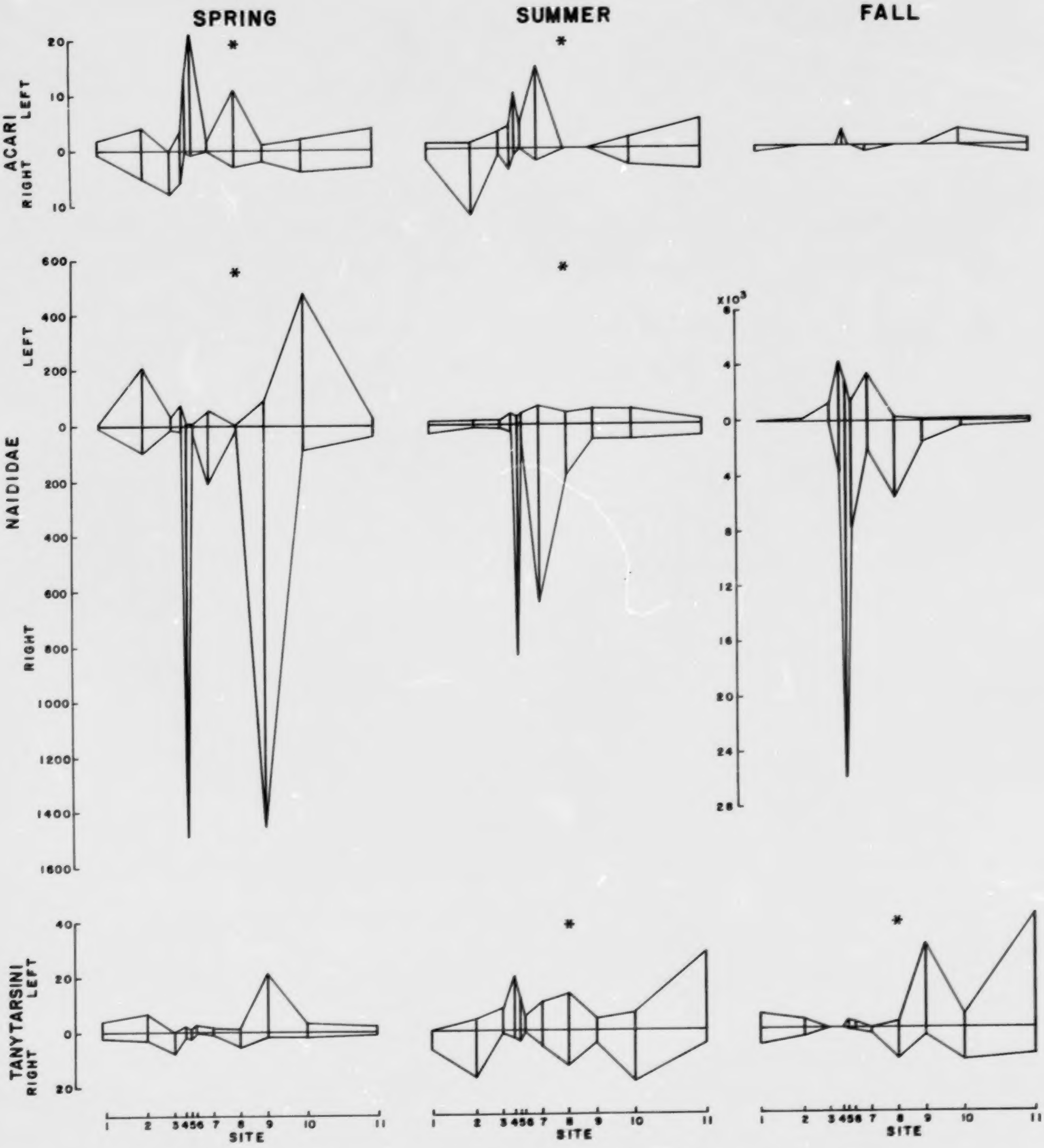

* Indicates the season in which a taxon explains a large fraction of the sample variance .

FIGURE 12 Continued .

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very low numbers in samples from sites upstream of Edmonton, but they showed gradual and definite increases in numbers downstream of the city. The response of these three genera at the sites farthest downstream was inconsistent. Other taxa such as Tanypodinae, Orthocladiinae, Tubificidae, *Heptagenia*, Heptageniidae, Mermithoidea, *Psychomyia*, *Pseudocleon*, *Isoperla*, and Capniidae showed similar trends, but were often rather well represented at upstream sites.

Only two taxa showed a gradual negative response. These were Enchytraeidae, which was selected 3 times by principal component analysis, and *Rhithrogena*, which was selected twice, once in spring and once in fall, by principal component analysis. The upstream densities for these two taxa were low and both taxa occurred occasionally at sites downstream of Edmonton. *Baetis* showed opposite responses in spring and fall: numbers decreased in spring and increased in fall.

Naididae was the only taxon to show a dramatic, short-lived positive response downstream of certain sites. Although naidids were one of the most typical components at certain sites in the fall, they accounted for only a small fraction of the variance in the first three principal components (eigenvector values 0.089, 0.046, and 0.039 in vector 1, 2, and 3, respectively), even though they accounted for a large fraction of the variance in the remaining principal components (e.g., eigenvector values 0.255, 0.117, 0.225, -0.310, 0.363, -0.528, -0.418 in vectors 4 to 10, respectively).

Only unidentified, small Hydropsychidae larvae did not show notable or consistent trends in the river section under study.

3.3.4 Relationships between Results from Cluster Analysis and Principal Component Analysis

Scattergrams obtained by principal component analysis are represented in Figures 9, 10, and 11 for spring, summer, and fall data, respectively.

Hypotheses formulated from the results of one analysis technique gain strength when these results are concordant with the results of another technique. Ideally, site clusters identified by cluster analysis should correspond to sites grouped by principal component analysis projections, and these site groups would have interpretable meanings in the context of the study.

The boundaries of site groups which were identified by cluster analysis in the 3 seasons are indicated on the corresponding principal component analysis projections (Figs. 9b to 11b).

3.3.4.1 Spring

Cluster analysis showed that in spring, sites fell into 3 major groups: clus-1, clus-2, clus-3 (Fig. 9a). Principal component analysis (Fig. 10b) indicated that the separation between clus1 and clus-2 was due mainly to density differences for taxa which were most characteristic for the first vector (Table 7). Sites from clus-2 were characterized by higher numbers of Chironomini, Tubificidae, Mermithoidea, Tanypodinae, Tricorythodes, Psychomyia and Ferrissia, whereas sites from clus-1 were characterized by Baetis, Alloperla, Rhithrogena, and Heptageniidae. The second vector (Table 7) explained differences within each of clus-1 and clus-2, which were due mainly to variations in abundance of Tanytarsini and Ceratopogonidae in one direction, and of Isoperla, Chironomid pupae, Tanypodinae, Hydropsychidae, and Psychomyia in the other. The third vector (Table 7) explained why the clus-3 right-bank sites at Rundle Footbridge and Sturgeon (typified by a predominance of Naididae, Turbellaria, Chironomidae pupae, and Tubificidae) were different from other sites (typified by Acari, Enchytraeidae, Glossosoma, and Nematoda).

3.3.4.2 Summer

Two site groups were differentiated by cluster analysis for the summer data (Fig. 10a). A comparison of cluster analysis and principal component analysis (Fig. 10) did little to clarify relationships among summer data. The separation of sites into only two clusters and the absence of any sub-clustering among sites was unexpected. However, an inspection of the relative locations of sites in the principal component analysis projections revealed that sites were projected in an orderly fashion: sites from the upstream locations were furthest from sites from downstream locations, whereas sites in the centre of the study section had an intermediate position on the principal component analysis projection.

3.3.4.3 Fall

Three major clusters (clus-1, clus-2, and clus-3) were identified in the fall data (Fig. 11a). Principal component analysis showed that the distinction between clus-1a and clus-1b was more important than suggested by cluster analysis alone, because both groups were physically separated by clus-2 on the principal component projections. The first vector separated the three site groups on the basis of density differences for Enchytraeidae on the positive side of the axis (+) and for Tricorythodes, Heptagenia, and Isoperla on the negative side (-). The first taxon was more typical of upstream sites, whereas the latter three were more characteristic of downstream sites. Enchytraeidae, Psychomyia (+), and Mermithoidea, Capniidae, Ferrissia Orthocladiinae (-), explain most of the variation in the second vector.

It is difficult to visualize the relative position of site groups when a two-dimensional projection is used to represent three-dimensional space, as is the case in Figure 11b. For example, principal component projections in two dimensions showed quite a bit of overlap between clus-1a and clus-2. However, analysis of the third vector indicated that these two clusters were quite different: Enchytraeidae, Chloroperlidae, and Rhithrogena were more typical of clus-1a, and Elmidae, Caenis, Tanytarsini, and Tubificidae were more typical of clus-2. The amount of overlap between clus-2 and clus-1b was reduced in a similar way in three-dimensional space. Cluster analysis clearly separated the right-bank site at Rundle Footbridge from all other sites; in two-dimensional space, however, principal component analysis showed little difference between this site and clus-2 sites. Naididae was the most typical faunal element at Rundle

Footbridge in the fall. This taxon had low eigenvector values in the first three vectors, but high eigenvector values in the remaining vectors. Such high values in vectors which explain nearly 50% of sample variance suggested that sites with high naidid numbers (e.g., right-bank site at Rundle Footbridge) are significantly different from sites with low naidids numbers.

3.3.5 One-Way Analysis of Variance (ANOVA)

Principal component analysis showed that there were differences in the taxonomic composition of the invertebrate assemblies in the site clusters which were identified by cluster analysis. However, the separation of these site clusters was also evident at a lower level of identification (e.g., major taxonomic groups) utilizing parameters which summarize information for the entire invertebrate assembly (i.e., total invertebrate density, Shannon-Wiener diversity, and total number of taxonomic groups). The statistical significance of differences between cluster means for these parameters was tested with a one-way ANOVA.

3.3.5.1 Spring

The one-way ANOVA performed on the data from the three site groups identified by multivariate analysis in spring showed that there were significant differences in all parameters tested, except for numbers of Trichoptera and Plecoptera (Table 8). Ephemeroptera (mayfly) numbers were significantly higher in the upstream part of

Table 8. Comparison of means for selected benthic parameters between sites groups defined by cluster analysis and principal component analysis for spring 1982 (summary of ANOVA results)

	Summary of results from one-way ANOVA		Summary of results from Student-Newman-Keuls Test
	F	p	
Nematoda (1)	7.62	0.0008	clus-3 < clus-1 < clus-2
Oligochaeta (1)	116.49	0.0000	clus-1 < clus-2 < clus-3
Ephemeroptera (1)	8.40	0.0004	clus-3 = clus-2 < clus-1
Trichoptera (1)	1.85	0.1623	no significant difference
Plecoptera (1)	0.57	0.5679	no significant difference
Chironomidae (1)	31.92	0.0000	clus-1 < clus-2 = clus-3
Total Numbers (1)	100.27	0.0000	clus-1 < clus-2 < clus-3
Total Number of Taxa	22.48	0.0000	clus-3 < clus-2 < clus-1
Shannon-Wiener Diversity	46.75	0.0000	clus-3 < clus-2 < clus-1

1. Tests performed on Log(x+1) transformed data.

2. $df_1 = 3$, $df_2 = 106$; tabulated F values for df_1 and $df_2 = 120$: $F(0.05) = 2.68$
$F(0.01) = 3.95$
$F(0.001) = 5.79$

3. "x = y": means for groups x and y are not significantly different at 0.050 level
"x < y": mean for group x is significantly lower than mean for group y at the 0.050 level

the study section (clus-1). Oligochaete, chironomid, and total invertebrate numbers increased significantly between upstream sites (clus-1) and downstream sites (clus-2); they were highest for right-bank sites at Rundle and Sturgeon (clus-3). The number of taxonomic groups and the Shannon-Wiener diversity declined in downstream direction and were lowest for sites in clus-3.

3.3.5.2 Summer

Because cluster analysis did not identify meaningful groups, no tests were done on cluster means for selected parameters.

3.3.5.3 Fall

The means for the four site groups identified by cluster analysis and principal component analysis differed significantly for all parameters tested (Table 9).

Total invertebrate numbers and oligochaete numbers followed the same pattern. Numbers increased significantly between upstream clus-1a sites and clus-2 sites immediately downstream of Edmonton and in the Fort Saskatchewan area. Although the means for the downstream clus-1b sites were lower than those for clus-2, they were significantly higher than those for clus-1a. Chironomid numbers showed a similar pattern, except that the means between clus-1b and clus-2 were not significantly different. Clus-3 (right-bank site at Rundle Footbridge) had the highest mean for each of the three parameters tested.

Table 9. Comparison of means for selected benthic parameters between site groups defined by cluster analysis and principal component analysis for fall 1982 (summary of ANOVA results)

	Summary of results from one-way ANOVA F	p	Summary of results from the Student Newman Keuls Test
Nematoda (1)	21.10	0.0000	clus-1a = clus-3 < clus-1b = clus-2
Oligochaeta (1)	163.71	0.0000	clus-1a = clus-1b < clus-2 < clus-3
Ephemeroptera (1)	33.26	0.0000	clus-3 = clus-1a < clus-2 < clus-1b
Trichoptera (1)	15.42	0.0000	clus-3 = clus-1a = clus-2 < clus-1b
Plecoptera (1)	3.95	0.0103	clus-3 = clus-2; clus-1a = clus-2; clus-3 < clus-1a < clus-1b
Chironomidae (1)	38.64	0.0000	clus-1a < clus-2 < clus-1b = clus-3
Total Numbers (1)	249.15	0.0000	clus-1a < clus-1b < clus-2 clus-3
Total Number of Taxa	18.42	0.0000	clus-3 < clus-1a = clus-2 < clus-1b
Shannon-Wiener Diversity	47.61	0.0000	clus-3 < clus-2 < clus-1a = clus-1b

1. Tests performed on Log(x+1) transformed data.

2. $df_1 = 2$, $df_2 = 107$; tabulated F values for df_1 and $df_2 = 120$: $F(0.05) = 3.07$
$F(0.01) = 4.79$
$F(0.001) = 7.32$

3. "x = y": means for groups x and y are not significantly different at 0.050 level
"x < y": mean for group x is significantly lower than mean for group y at the 0.050 level

The parameter means for Plecoptera, Ephemeroptera, and Trichoptera were lowest for clus-3 and highest for clus-1b. However, the differences between means for clus-3 and the remaining site groups were not as great as might have been expected. Ephemeroptera (mayfly) numbers were not significantly different between clus-3 and clus-1a. Caddisfly numbers were not significantly different among clus-1a, clus-2, and clus-3. Although Plecoptera (stonefly) numbers were significantly lower in clus-3 than in clus-1a, the means for each of these two site groups were not significantly different from the mean for clus-2. The number of taxonomic groups was lowest for clus-3 and highest for clus-1b; there was no significant difference between clus-1a and clus-2 cluster means for this parameter. The Shannon-Wiener diversity was lowest for clus-3 and highest for clus-1a and clus-1b; the latter two were not significantly different from each other.

4.0 DISCUSSION

4.1 Community Descriptors

The results of the spring, summer, and fall invertebrate surveys of the North Saskatchewan River in 1982 showed important changes in the benthic invertebrate community in the river between Devon and Pakan Bridge. These changes can be attributed to an alteration of the quality of the water.

The most characteristic features of the changes in community parameters between Devon and Pakan Bridge are listed below:

1) The total invertebrate numbers per unit surface area increased downstream of the city. The highest number of specimens per unit surface area was recorded at the Rundle Footbridge right-bank site.
2) Shannon-Wiener diversity values were highest for the sites farthest upstream and downstream in the study section of the river. The lowest values were determined for the Rundle Footbridge right-bank site.
3) The distribution of numbers among major taxa showed two important changes. Sites upstream of Edmonton were characterized by an even distribution of numbers among taxa. The first change whereby oligochaetes, chironomids, and nematodes became dominant usually occurred between 50th Street Footbridge and Rundle Footbridge. The second change was an increase in mayfly, stonefly and caddisfly numbers which usually occurred between Sturgeon and Vinca Bridge, and

which marked the return to an even distribution of numbers among taxa. The return to an even distribution of numbers among taxa in the downstream part of the study section was interpreted as evidence of "recovery" from the impacts of effluent discharge in the greater Edmonton area.

4) There were slight and frequently inconsistent decreases in numbers of taxonomic groups within the city limits; the lowest value was recorded at Rundle Footbridge.

Although the changes described above were more pronounced for right-bank sites, they are also evident for left-bank sites. Most municipal effluents enter the river on the right bank.

The nature of the changes which occurred in the zoobenthic assemblies of the North Saskatchewan River in 1982 suggested that enrichment was the most significant impact. Enrichment contributes to increases in total numbers of organisms through total food enhancement; it could contribute to reduced diversity through temporary reductions in oxygen levels or through substrate fouling. There was no substantial evidence to indicate that the invertebrate community of the North Saskatchewan River was adversely impacted by the presence of toxic substances in effluents discharged into the river. In some river sections, toxic substances would have produced lower total numbers and even lower diversity, and possibly the total elimination of living organisms.

Temperature and food resources were the two factors most likely to limit the development of invertebrate populations in the

North Saskatchewan River. Although site-to-site temperature differences were neglegible on a given date (see Section 6.0, Part One), enrichment coming from point-source effluents resulted in substantial longitudinal differences in the quantity and quality of available food. On the other hand, seasonal temperature differences in the river were quite large, and these differences may have masked the effects of food abundance, especially at certain times of year.

Populations sampled in spring integrated the effects of winter conditions on the zoobenthos. In the winter, dissolved oxygen levels were adequate (see Section 7.0, Part One of this report), but invertebrate populations were unable to exploit fully the food available at certain sites, because low temperature reduced their metabolism and inhibited their growth and reproductive activity. Consequently, site-to-site differences detected in spring and attributable to the influence of point-source effluents were small.

Higher temperatures from spring through summer resulted in increased growth rates and reproductive activity of true benthic invertebrates. The emergence of adults of semi-aquatic insect species (e.g., Plecoptera, Ephemeroptera, Trichoptera, and Diptera) and their oviposition (egg-laying) represented the start of new generations which often had very high numbers at the outset. Population numbers in fall were largely a function of food availability during summer and fall and, therefore, differences between sites were maximal.

In general, the principal causes of the cultural eutrophication of rivers are effluents from municipal wastewater treatment plants and from industries, followed by runoff from agricultural and urban areas (Hynes 1960). These sources represent the addition of inorganic and organic nutrients to aquatic systems and contribute directly or indirectly to an abundant and renewable food supply for herbivorous and detritivorous organisms. Although increase in the amount of food available is in itself not detrimental, the oxidation of abundant organic material in water through both chemical and biological processes requires a large amount of dissolved oxygen, and this can contribute to the onset of anaerobic conditions in slow moving waters. Some invertebrate taxa have high oxygen requirements (e.g., Plecoptera, Ephemeroptera, and Trichoptera). The larvae of these insects are often designated as "clean water species". In contrast, "dirty water species" is a term used to describe Oligochaeta, Chironomidae and Nematoda, groups which are generally more tolerant of lower oxygen concentrations and which tend to be mainly detritivorous.

Hynes (1960) has described typical cases of severe organic pollution where the entire aquatic community was eliminated because of anaerobic conditions. In situations where only very low levels of oxygen remained in solution, tubificid worms and chironomid larvae were often the only invertebrates present. Hynes also described cases of mild organic pollution which occurred when biological treatment was efficient, or when dilution was great. In such cases, little more than a general increase in invertebrate population density was observed.

The invertebrate data collected in the North Saskatchewan River in 1982 did not resemble cases of severe organic pollution described as textbook examples in the literature. Instead, they were more similar to cases which Hynes cited as illustrative of mild organic contamination. In the North Saskatchewan River in 1982, the relatively high discharge rates and flow regulation (see Section 2.4, Part One) ensured high dilutions. Consequently, satisfactory levels of dissolved oxygen were maintained throughout the year. Flow regulation in the North Saskatchewan River has been cited as a major reason for improved dissolved oxygen conditions in recent years (Alberta Environment 1978, Bouthillier 1983, Paterson and Nursall 1975).

The impact of enrichment on the invertebrate community of the North Saskatchewan River was nonetheless distinct. In the upstream part of the study section, a relationship between changes in invertebrate community structure and point-source effluent discharges was established.

Low total invertebrate numbers, high H' values, and a fairly even distribution of numbers among taxa were features which characterized Devon and E.L. Smith, and were indicative of a virtually unimpacted invertebrate community and good water quality.

E. L. Smith was considered to be an unimpacted site, but the low percentage of clean water taxa (Plecoptera, Ephemeroptera, and Trichoptera) in the Fall suggested a slight perturbation. Although it was possible that these changes were due to human activities (such as the release of chlorinated effluents from the Devon Sewage Treatment Plant), it is more likely that they were caused by the activity of the huge corixid populations described above.

The first signs of enrichment were detected at Rossdale, primarily at the left-bank site. The community response was moderate: numbers were somewhat higher, but H' values remained unaffected; it was only in fall that oligochaete (tubificids and naidids) numbers increased appreciably. The left-bank site at Rossdale was the most upstream site in the study section where extensive filamentous algal growth was observed. The main potential sources of impact between E.L. Smith and Rossdale were storm sewers. The left-bank site at Rossdale was downstream of the Groat Bridge and Quesnell Bridge storm sewers, major sewers which drain the north-west part of the city. However, the possible existence of a number of small combined sewers in this section of the river is under investigation (see Section 2.10, Part One of this report).

Community changes were more apparent at the 50th Street Footbridge left-bank and right-bank sites, particularly in the fall. Higher total densities, a drop in diversity, and the dominance of oligochaetes distinguished these sites from upstream sites. Differences in invertebrate fauna composition between Rossdale and 50th Street were attributed to the influence of a number of major combined sewers in this part of the study section of the river. Combined sewers convey domestic sewage and surface runoff to the Gold Bar Wastewater Treatment Plant. During heavy rainfalls in 1982, the combined sewer system became overloaded and some raw sewage and surface runoff entered the North Saskatchewan River. These discharges were apparently more important in summer and fall than in winter or spring. Consequently, the impact from combined sewers on invertebrates was more evident in the fall sample set than in the spring sample set.

Because runoff episodes occur many times in most years, more or less permanent habitat alterations can be expected which, in turn, induce structural and functional changes in the benthic community. Urban runoff varies in its effect on aquatic biota, depending on its chemical and physical composition. At the Rossdale left-bank site and at both 50th Street sites, the effect of urban runoff was enrichment. It promoted the growth of filamentous algae and encouraged the development of a denser invertebrate community. Similar effects due to this type of enrichment have been documented elsewhere. For example, Pratt et al. (1981) reported that the Greenfield urban runoff into the Green River (Massachusetts) resulted in a decrease in community diversity and a change in the taxonomic structure of the community, from one dominated by pollution (enrichment) sensitive forms to one dominated by pollution (enrichment) tolerant forms.

Although combined sewer effluents had a discernible influence on the water quality of the North Saskatchewan River, as evidenced by changes in the invertebrate community, it was downstream of the Gold Bar Wastewater Treatment Plant that the greatest changes in the invertebrate community occurred. The site most affected by the discharge from this plant was the right-bank site at Rundle Footbridge which was located immediately downstream of the plant outfall. The most remarkable change in the community at this site was the dramatic increase in oligochaete numbers, particularly for the family Naididae. With few exceptions, naidids feed on bacteria, detritus, and algae (Learner et al. 1978), and the main factors determining their distribution and abundance are the nature of the substrate, the presence and kind of vegetation, and the availability of oxygen. The response of naidids may vary with the types of pollutants entering a river. In general, however, the organic enrichment of rivers with stony substrates results in considerable naidid population increases. The high numbers of naidids (27,000 individuals per sample) recorded for the right-bank site at Rundle Footbridge were similar to those reported by Szczesny (1974) for a population of Nais elinguis in the Polish river Kryniczanka downstream of a sewage outfall. Nais cummunis/variabilis, and Chaetogaster diaphanus are also often observed in association with organic enrichment (Learner 1979). These two species, together with N. elinguis, dominated the naidid species association at the Rundle Footbridge right-bank site. There is little doubt that the high naidid numbers in the well aerated gravel riffles at Rundle Footbridge were induced by enrichment from the Gold Bar Wastewater Treatment Plant effluent.

Naidids are an important food source for predatory members of the benthic community (Learner et al. 1978) and represent an important pathway for energy transfer to higher trophic levels. Although naidids may be common in natural habitats, they are often also found in large numbers in sewage filter beds where they are believed to play a considerable role in the process of sewage breakdown (Learner 1979). It is quite possible that huge naidid populations like those which occurred downstream of the Gold Bar Wastewater Treatment Plant contributed greatly to the purification of the river water.

The magnitude of the naidid population at the Rundle Footbridge right-bank site resulted in a strongly skewed distribution of numbers among taxa and low diversity values. Marked declines in numbers of other taxonomic groups were only noted in the fall at this site. In spring and summer, thriving populations of mayflies, stoneflies, and caddisflies maintained fairly high numbers. This suggests that there was more stress on the invertebrate community in late summer and fall than at other times of the year. Higher water temperatures at that time probably intensified the impact of point-source effluents entering the river by contributing to higher metabolic rates and lower dissolved oxygen levels. Adverse effects on the invertebrate community would have been increased when primary treated sewage effluent was diverted into the river from the Gold Bar Wastewater Treatment Plant during rain-induced peak flows in the summer. The bypass of the secondary treatment process occurred on 32 days from June to October, 1982, 25 of these being in the months of July and August.

No differences in the invertebrate fauna were measured between the Rundle Footbridge left-bank site and the 50th Street Footbridge left-bank site. There were no additional point-source discharges between the two sites on this bank.

Spring and summer data from the right-bank site at Beverly Bridge were unexpected in the light of previously collected information for this location (Alberta Environment, unpublished data). The fauna showed little response to organic enrichment in 1982. Total numbers were much lower than at the Rundle Footbridge right-bank site, although the percentage of enrichment-tolerant taxa was high. As noted in Part One of this report (Section 3.0), lateral mixing in the North Saskatchewan River is poor; effluent plumes persist over relatively long distances, and the channels followed by these plumes change according to river discharge volumes. The Gold Bar Wastewater Treatment Plant effluent plume was probably confined to the central part of the river at Beverly Bridge during and prior to the spring and summer sampling in 1982 and thus had little influence on the site where invertebrates were sampled, as there were extensive shallows near the right bank at this location.

The changes which occurred in the community further downstream of Edmonton were neither as remarkable nor as consistent as those observed at the Rundle Footbridge right-bank site. The overall fauna composition changed little for sites from Clover Bar to Sturgeon. However, the population density for most taxonomic groups increased in downstream direction. Taxa most representative of this tendency were the mayflies *Tricorythodes*, *Heptagenia*, and unidentified Heptageniidae, the caddisflies *Psychomyia*, *Cheumatopsyche*, *Hydropsyche*, and unidentified Hydropsychidae, the stoneflies *Isoperla* and *Alloperla*, and the mollusk *Ferrissia*. These taxa commonly occur in fairly eutrophic environments. Their food consists mainly of fine particulate organic matter (Merritt and Cummins 1979) and they are known to have relatively wide tolerances to a variety of chemicals. For example, Roback (1962) reported the occurrence of Hydropsychidae in waters with wide ranges in pH, turbidity, hardness, chloride, oxygen and nutrient concentration; Wiggins (1977) considered *Cheumatopsyche* to be a genus tolerant of organic enrichment. Therefore, the consistent pattern of population increase among invertebrates downstream of Edmonton is primarily a response to organic enrichment.

The zoobenthic data collected in 1982 were not indicative of concentrations of toxic substances coming from municipal or industrial effluents. This study was not designed to identify specific or localized impacts from individual effluents to the river, but rather to characterize the integrated impact on water quality of all effluents to a section of the river. It is likely that municipal and industrial discharges downstream of Edmonton delay "recovery" of the fauna in the North Saskatchewan River by contributing additional enrichment. As discussed earlier, recovery implies the return to a community structure comparable to that of the unimpacted river.

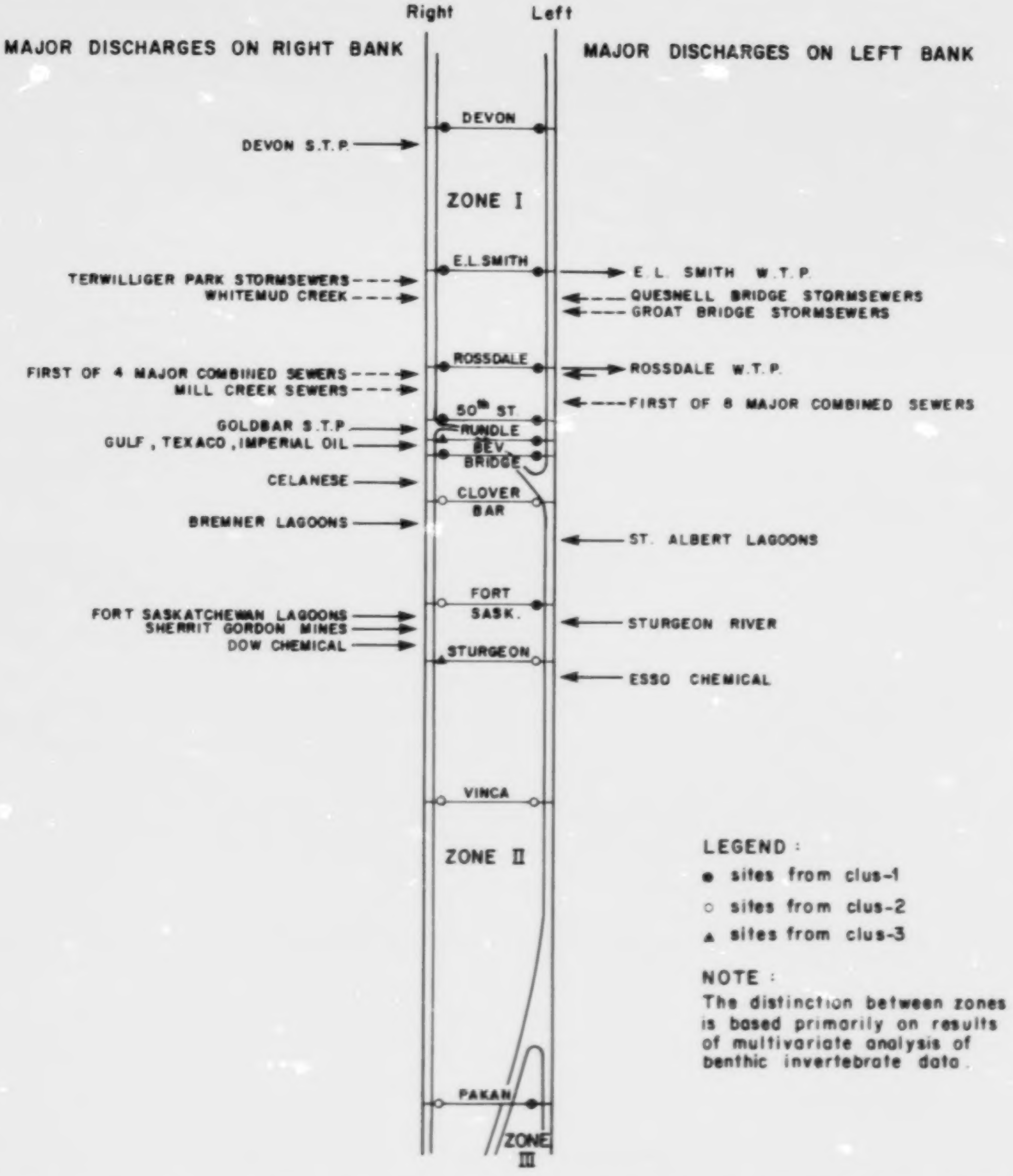
The invertebrate communities at Vinca Bridge and Pakan Bridge, the two locations furthest downstream in the study section of the river, showed consistent signs of recovery. The distribution of numbers among major taxa and the values for the Shannon-Wiener diversity index were comparable to those observed at Devon. However, total numbers were much higher. The invertebrate community characteristics indicated that the river water at Pakan Bridge had regained a level of quality satisfactory to the requirements of a diversity of invertebrates, but they also showed clearly that the river at Pakan Bridge was much more eutrophic than at Devon.

4.2 Multivariate Analyses

Spring and Fall

Figures 13 and 14 synthesize the information provided by the multivariate analyses of invertebrate spring and fall data. The three zones which are shown in these figures correspond to the site groups identified by cluster analysis and principal component analyses.

Zone I groups sites which were unaffected by major point-source effluents and which had unimpacted benthic invertebrate communities. This zone extended further downstream in the spring than in the fall. Sites which belonged to Zone I in the spring but not in the fall were downstream of major storm and combined sewer outfalls. The quality of spring runoff (ice melt) may have been different from that of summer runoff (rain) and the effects of spring runoff neither


Right
Left
MAJOR DISCHARGES ON RIGHT BANK
MAJOR DISCHARGES ON LEFT BANK
DEVON
DEVON S.T.P.
ZONE I
E.L.SMITH
E. L. SMITH W.T.P.
TERWILLIGER PARK STORMSEWERS
WHITEMUD CREEK
QUESNELL BRIDGE STORMSEWERS
GROAT BRIDGE STORMSEWERS
ROSSDALE
ROSSDALE W.T.P.
FIRST OF 4 MAJOR COMBINED SEWERS
MILL CREEK SEWERS
FIRST OF 8 MAJOR COMBINED SEWERS
50th ST.
GOLDBAR S.T.P.
RUNDLE
GULF, TEXACO, IMPERIAL OIL
BEV. BRIDGE
CELANESE
CLOVER BAR
BREMNER LAGOONS
ST. ALBERT LAGOONS
FORT SASK.
FORT SASKATCHEWAN LAGOONS
SHERRIT GORDON MINES
DOW CHEMICAL
STURGEON RIVER
STURGEON
ESSO CHEMICAL
VINCA
ZONE II
PAKAN
ZONE III
LEGEND:
● sites from clus-1
○ sites from clus-2
▲ sites from clus-3

NOTE:
The distinction between zones is based primarily on results of multivariate analysis of benthic invertebrate data.

FIGURE 13. SPRING 1982: SCHEMATIC PRESENTATION OF ZONES OF DIFFERENT WATER QUALITY IN THE NORTH SASKATCHEWAN RIVER

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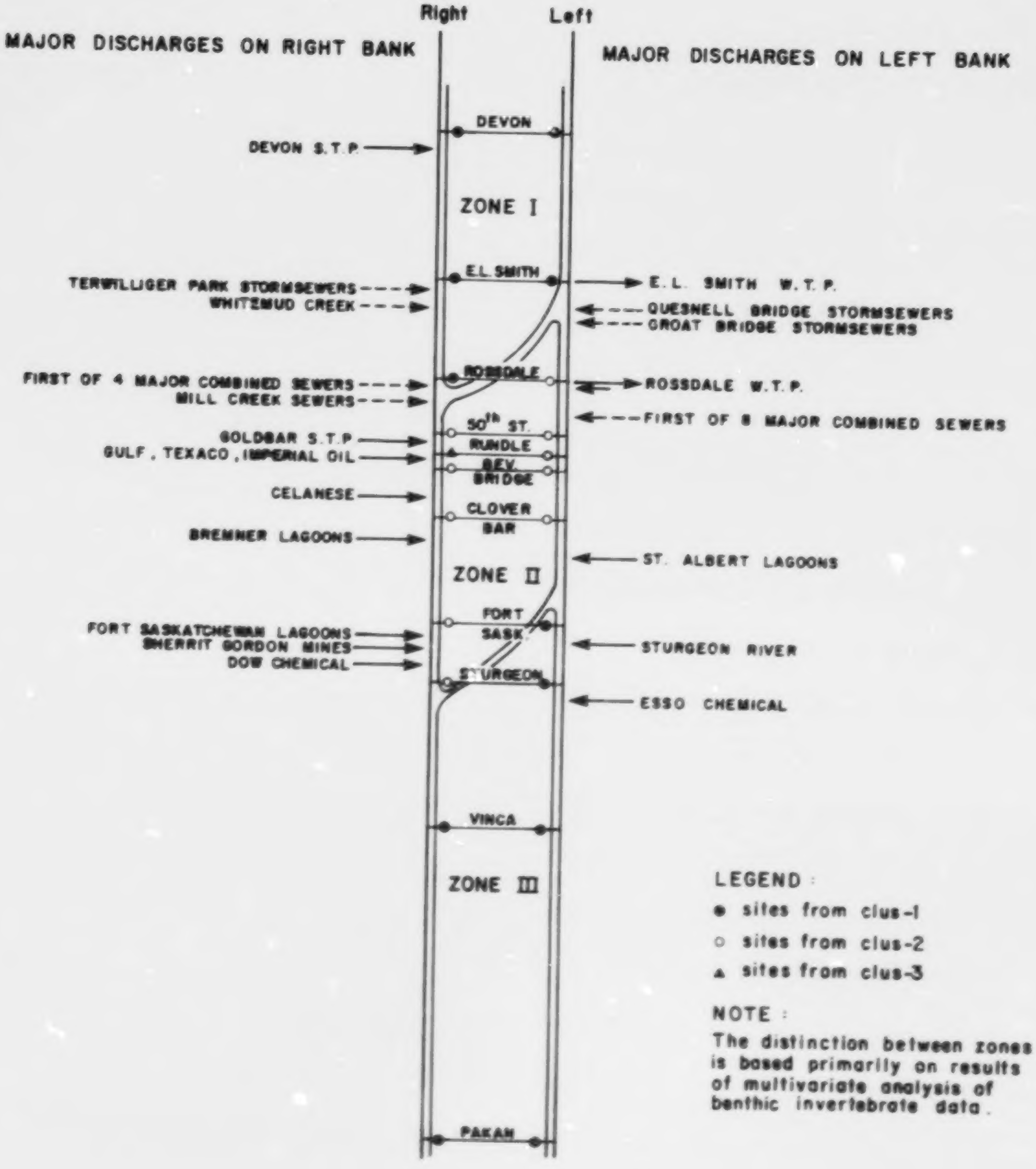
Right
Left
MAJOR DISCHARGES ON RIGHT BANK
MAJOR DISCHARGES ON LEFT BANK
DEVON
DEVON S.T.P.
ZONE I
E.L. SMITH
TERWILLIGER PARK STORMSEWERS
WHITEMUD CREEK
E.L. SMITH W.T.P.
QUESNELL BRIDGE STORMSEWERS
GROAT BRIDGE STORMSEWERS
ROSSDALE
FIRST OF 4 MAJOR COMBINED SEWERS
MILL CREEK SEWERS
ROSSDALE W.T.P.
50th ST.
FIRST OF 8 MAJOR COMBINED SEWERS
GOLDBAR S.T.P.
RUNDLE
GULF, TEXACO, IMPERIAL OIL
BEV. BRIDGE
CELANESE
CLOVER BAR
BREMNER LAGOONS
ST. ALBERT LAGOONS
ZONE II
FORT SASK.
FORT SASKATCHEWAN LAGOONS
SHERRIT GORDON MINES
DOW CHEMICAL
STURGEON RIVER
STURGEON
ESSO CHEMICAL
VINCA
ZONE III
PAKAN
LEGEND :
● sites from clus-1
○ sites from clus-2
▲ sites from clus-3

NOTE :
The distinction between zones is based primarily on results of multivariate analysis of benthic invertebrate data.

FIGURE 14. FALL 1982 : SCHEMATIC PRESENTATION OF ZONES OF DIFFERENT WATER QUALITY IN THE NORTH SASKATCHEWAN RIVER

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ENVIRONMENT
Pollution Control Division
Water Quality Control Branch

as persistent nor as perceptible as those of summer runoff. Mention was made earlier of the greater impact of combined sewers in the fall than in the spring. This was verified by cluster analysis and principal component analysis, which grouped sites affected by major combined sewers with other impacted sites in fall, but not in spring.

Zone II groups sites which were downstream of major municipal and industrial facilities. The invertebrate community clearly showed signs of impact at all of these sites. Multivariate analysis verified that two sites, Rundle Footbridge right-bank in both seasons and Sturgeon right-bank in spring only, had very different invertebrate communities and were more severely impacted than other sites. In spring, Zone II included two sites, Beverly Bridge right-bank and Fort Saskatchewan left-bank, which were grouped within Zone I sites according to cluster analyses. However, sampling problems, due to main channel shift at Beverly Bridge and to the influence of variable mixing patterns at Fort Saskatchewan, were suspected and these two sites probably belong in Zone II. Impacts from point-source effluents extended further downstream in the spring than in the fall. The reasons for this are discussed in greater detail below.

Zone III represents a recovery zone. The invertebrate communities at these sites showed many similarities to those of Zone I, the most important difference being the higher invertebrate densities at sites in Zone III. As a reflection of the remnant effects of winter conditions, the recovery zone began further downstream in the spring than in the fall. The reasons for this will also be discussed below.

Summer

Summer samples were collected about one month after the spring peak discharges, which were exceptionally high in 1982. This event must have been a major source of disturbance to the invertebrates. Waters (1972) has shown that changes in flow rates result in changes in drift rates. Taxa respond differently to this type of short-term disturbance; some are eliminated entirely, whereas others persist (Patrick 1970). Organisms which are washed from one area may become temporary or permanent residents of an area downstream, while they are themselves replaced by other organisms drifting from upstream. In this way, seasonal peak flows or floods can have a "homogenizing" effect on benthic invertebrate composition. Crossman et al. (1974) came to a similar conclusion in their study of the Clench River in Virginia, where only minor site-to-site differences were detected after a flood event. Prior to the flood, however, a distinct clustering of sites, based on the taxonomic composition of the zoobenthos, could be related to the impact of point-source discharges. These authors concluded that floods have a homogenizing effect on the benthic invertebrate community. The situation in the North Saskatchewan River in 1982 was comparable, because no site clustering occurred after the late-spring peak discharges, even though there were definite patterns in the spring and fall data. As in the Clench River study, a marked increase in flow rates may have induced a more uniform summer distribution of invertebrates among sites. The Sturgeon left-bank site was distinctly different from all other sites at this time (see Fig. 10), but this difference was probably due more to substrate differences at this site or to drift from the Sturgeon River, than to water quality differences in the North Saskatchewan River.

4.3 Indications of a Seasonal Pattern in the Water Quality of the North Saskatchewan River

Despite the similarities between Figures 13 and 14, there were important differences in the zones which were indicative of water quality in the North Saskatchewan River in the spring and fall of 1982. Some of these differences (e.g., inclusion or exclusion of sites located below storm and combined sewers in Zone I) can be explained by qualitative differences in effluents discharged into the river. Other differences, such as the lengths of the impacted and recovery zones (Zone II and Zone III, respectively) in spring and fall, have causes other than effluent quality.

Most biological and chemical processes proceed more rapidly at high temperatures than at low temperatures. Therefore, in a well oxygenated river, biological and chemical degradation will be more efficient during the warm period of the year than in winter and early spring. Consequently, Zone II should be longer in the winter than in the summer. This alone could explain the difference in the length of Zone II in spring and in fall; spring invertebrate data were a cumulative reflection of water quality conditions during winter and early spring, whereas fall invertebrate data were a cumulative reflection of summer and early fall conditions. However, it is likely that river discharge had a strong influence on zone boundaries.

Except for the local runoff in spring, flows are usually low and steady in winter and early spring in the North Saskatchewan River. Late spring and early summer flow rates are usually higher and variable because of mountain runoff and storm events. If both phenomena coincide, as was the case in 1982, discharges can increase dramatically.

High discharges have a homogenizing effect on benthic invertebrate distribution and have a "flushing" or "cleansing" effect on the river as a whole. In terms of late-spring/early summer flushing effects, the fall picture can be thought of as the cumulative effect of 3 or 4 months of near optimal temperature and flow conditions. The spring picture can be considered to represent the cumulative effect of varying temperature and flow conditions over most of the year.

The river zone patterns for spring and fall may be regarded as indicative of a cyclic and dynamic phenomenon whereby the river is cleansed annually and is "soiled" gradually during the rest of the year by discharges from urban areas. The extent of the most impacted zone may vary from year to year and during the course of the year as a result of changes in flow rates, water temperatures, and overall effluent quality and quantity.

5.0 CONCLUSIONS

a) There were clear patterns of change in the benthic invertebrate associations of the North Saskatchewan River in 1982 between Devon and Pakan Bridges; these changes conformed with certain variations in water quality, particularly nutrient and organic enrichment.

b) The invertebrate responses downstream were typical of enrichment. Invertebrate populations responded to greater food availability by increasing in density. This was particularly evident in taxa such as Chironomidae, Nematoda, and Oligochaeta, which are tolerant of environmental stress. Lower Shannon-Wiener diversity values reflected changes in community composition.

c) The first indications of major density and compositional changes occurred in the section of the river which passes through the Edmonton urban area; they were more pronounced at right-bank sites, where the majority of point-source effluents enter the river.

d) The magnitude and nature of the effects of effluents entering downstream of the Fort Saskatchewan location were more difficult to determine because they were masked by the remnant effects of upstream effluents.

e) Stormsewer effluents were the first to have an enrichment effect on the river. However, their impact on the invertebrate community occurred only in the fall, not in spring. This suggested that surface runoff in spring (snowmelt) had a different quality than that in summer and fall (rain).

f) The effects of combined sewers, which discharged surface runoff and raw sewage to the river during periods of heavy rainfall, impacted the invertebrate community only in fall, not in spring.

g) The Gold Bar Wastewater Treatment Plant effluent was a continuous and major food source for invertebrates; it had the most consistent and demonstrable effect on invertebrates. The influence of the Gold Bar Wastewater Treatment Plant was evident a considerable distance downstream of the Edmonton city limits and it overshadowed the impacts of other effluents.

h) The fact that benthic invertebrates of nearly all taxa increased in numbers downstream of Edmonton indicated that industries in the Edmonton and Fort Saskatchewan area did not have an overall toxic impact on invertebrates but, instead, contributed to the eutrophication of the river.

i) The sites sampled comprised three main site groups which corresponded to three zones of water quality: an unimpacted zone upstream of Edmonton, an impacted zone downstream of effluents, and a recovery zone. The invertebrate associations in the recovery zone were rather similar to those in the unimpacted zone; however, the much higher numbers in the recovery zone indicated that the river was more eutrophic downstream of Edmonton. These zones were distinguished by cluster and principal component analyses.

j) Benthic invertebrate data indicated the existence of a cyclic and dynamic pattern of water quality in the river. The relative length of the impacted zone and of the recovery zone would be determined not only by effluent quality and quantity, but also by biological and chemical degradation processes and flow rates. The length of the impacted zone would be shortest during the summer, following the flushing effect of spring peak discharges and a period of optimum conditions for degradation processes. As water temperatures drop in the fall and flow rates decrease, the impacted zone extends gradually further downstream to become longest in the winter.

k) Although the zoobenthos alone does not present a conclusive argument for the judging of water quality, seasonal and spatial patterns were clear and statistically significant. They identify times and locations where physical and chemical studies should be concentrated.

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APPENDIX

APPENDIX I: Scientific names of benthic invertebrates and their common equivalents frequently used in this report.

APPENDIX I. Scientific names of benthic invertebrates and their common equivalent(s) frequently used in this report.

Scientific Names	Common Names
	'coelenterates'
Coelenterata	sac animals, such as hydras
	'crustaceans'
Amphipoda	scuds, sometimes "freshwater shrimps"
Arachnida (Acari and Aranea)	spiderlike animals (mites and spiders)
	'worms'
Turbellaria	flatworms
Hirudinea	leeches, "blood suckers"
Oligochaeta	bristle worms
Nematoda	round worms
	'insects'
Diptera	two-winged flies such as midges, mosquitoes no-see-ums, black-, deer-, horse-, and crane-flies
Lepidoptera	butterflies, moths
Odonata	dragonflies and damselflies
Collembola	springtails
Ephemeroptera	mayflies
Trichoptera	caddisflies
Plecoptera	stoneflies
Corixidae	water-boatmen
Coleoptera	beetles
	'mollusks'
Mollusca	clams and snails

Volume

3

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North Saskatchewan River
Characterization of Water Quality in the Vicinity of Edmonton (1982-83)
Part III

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Alberta
ENVIRONMENT
Environmental Protection Services
Pollution Control Division
Water Quality Control Branch

NORTH SASKATCHEWAN RIVER:
CHARACTERIZATION OF WATER QUALITY
IN THE VICINITY OF EDMONTON (1982-1983)

PART III

COMPENDIUM OF DATA FOR PARTS I AND II

Water Quality Control Branch
Pollution Control Division
Environmental Protection Services
Alberta Environment
Edmonton, Alberta

June 1986

This volume forms Part Three of the report entitled "North Saskatchewan River: Characterization of Water Quality in the Vicinity of Edmonton (1982-1983)".

Part One includes summaries of river basin characteristics, mixing properties, sampling dates and locations, measured variables, field methods, and laboratory methods. Results sections of Part One include temperature, dissolved oxygen, and results of analyses for major ions, metals, organic compounds, macronutrients, chlorophyll-a, carbon, bacteria, and BOD/COD.

Part Two summarizes the analysis of the zoobenthos (i.e. those invertebrates inhabiting the bottom sediments beneath the flowing water) and includes an interpretation of the value of the zoobenthos as an integrator in assessing year-round water quality conditions.

Part Three is a compendium of the analytical data for Parts One and Two. All graphs, tables and discussions in Part One and Part Two have been drawn from or based on this data base; no additional data, discussion, or analyses are included in Part Three, which consists of four sections:

1. NAQUADAT Summary Report for all analyses carried out on water samples collected from the North Saskatchewan River during the study period.
2. NAQUADAT Summary Report for analyses of final effluent grab samples from the sewage treatment plants licensed to discharge into the study section of the North Saskatchewan River.

3. NAQUADAT Summary Reports for analyses of final effluent grab samples from industries licensed to discharge wastewater into the study section of the North Saskatchewan River.
4. Analytical data from the zoobenthos study conducted in 1982 in the study section of the North Saskatchewan River.

SECTION 1

NAQUADAT Summary Report for all analyses carried out on water samples collected from the North Saskatchewan River during the study period.

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REQUEST 0001 -  0003 PAGE   1                  NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                  SURFACE WATER DATA
STATION 00AL05DF2069    LAT. 53D 22M 19S  LONG. 113D 44M 50S   PR 3   UTM 12 317250E 5916950N  FOR MAY 19, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER                    UPSTREAM OF DEVON BRIDGE
 COMPOSITE SAMPLE -  LEFT,CENTRE,RIGHT

                          97251F      02065F      08102F      02042F      02041L      10301L      08202L      08301L
                         DEPTH OF   TEMPERATURE   OXYGEN     SPECIFIC    SPECIFIC       PH        OXYGEN      OXYGEN
                         SAMPLING      WATER     DISSOLVED   CONDUCT.    CONDUCT.                BIOCHEM.   TOTAL COD
                   SUBM FROM SURF.                                                             DEMAND-BOD
                    ID       M                      02                                              02          02
                                       DEG.C       MG/L      USIE/CM      US/CM     PH UNITS       MG/L        MG/L
SAMPLES(FLAGS)            21(0)       24(0)       24(0)       20(0)       24(0)       24(0)       21(5)       24(2)
           LOW               .3          .5         6.6        220.        266.         8.1          .7        L5.0
          HIGH              3.4        22.5        14.8        410.        356.         8.5         2.9        97.4
       AVERAGE              1.5        12.8        10.0        329.        319.                    1.5*       16.2*
      STD.DEV.               .9         6.6         2.1         45.         22.                     .6*       19.0*
  PERCNT:10TH                .3          1.         7.8        270.        289.         8.1          .9         5.5
          25TH              1.0         7.5         8.5        315.        310.         8.3        L1.0         7.0
   MEDIAN 50TH              1.5        15.5         9.2        330.        317.         8.4         1.3        12.0
          75TH              1.8        17.8        11.3        350.        332.         8.4         1.9        15.5
          90TH              2.4        18.5        13.4        388.        344.         8.4         2.5         24.
SECONDARY CODE                                                                                              04L

                          06536L      06005L      06154L      06107L      06905L      06715L      06721L      10151L
                         PHENOLIC     CARBON      CARBON      CARBON      CARBON     CHLORO -  CHLOROPHYLL  ALKALINITY
                         MATERIAL     TOTAL     DISSOLVED   DISSOLVED  PARTICULATE   PHYLL A       -A-        PHENOL
                          PHENOL     ORGANIC    INORGANIC    ORGANIC      TOTAL                 EPILITHON   PHTHALEIN
                   SUBM                 C           C           C           C                               CACO3
                    ID     MG/L        MG/L        MG/L        MG/L        MG/L       MG/M3       MG/M2        MG/L
SAMPLES(FLAGS)            24(15)      11(0)       16(1)       16(1)       16(0)        9(0)        9(0)       22(12)
           LOW            L.002         4.8         L0.          L.4         .11         .43        3.91          .0
          HIGH             .009         11.        35.8          6.4        5.67        2.53       15.90        L4.2
       AVERAGE             .003*        7.7        30.5*         2.5*       1.32        1.19       9.118         2.3*
      STD.DEV.             .002*        1.8         8.2*         1.8*       1.30         .64       3.936         2.1*
  PERCNT:10TH             L.002          6.        29.0           .6         .36                                 .0
          25TH            L.002          6.        30.0          1.0         .64         .77        7.06          0.
   MEDIAN 50TH            L.002         7.9        32.0          1.9         .91        1.06        8.25        L4.2
          75TH             .002          9.        34.5          3.8        1.58        1.46       10.83        L4.2
          90TH             .003         9.5        35.0          4.7        2.08                                L4.2
SECONDARY CODE            37L

                          10101L      06301L      06201L      17203L      16306L      09107L      14102L      10602L
                        ALKALINITY  CARBONATE   BICARBONT.   CHLORIDE    SULPHATE    FLUORIDE     SILICA     HARDNESS
                          TOTAL      (CALCD.)     (CALCD.)   DISSOLVED   DISSOLVED   DISSOLVED   REACTIVE      TOTAL
                                                                                                             (CALCD.)
                   SUBM   CACO3        CO3        HCO3         CL          SO4          F          SIO2        CACO3
                    ID    MG/L        MG/L       MG/L         MG/L        MG/L        MG/L        MG/L         MG/L
SAMPLES(FLAGS)            24(0)       22(12)      22(12)      24(24)      24(1)       24(0)       24(0)       24(0)
           LOW             114.          0.       Q132.        L0.         L5.         .11         2.6        113.
          HIGH             149.         Q5.        182.       L1.0         47.         .16         5.6        177.
       AVERAGE             132.         3.*       155.*                    34.*        .13         4.0        149.
      STD.DEV.              9.          3.*        12.*                    10.*        .01          .8         15.
  PERCNT:10TH              117.          0.        141.        L0.         25.         .11         3.0        134.
          25TH             127.          0.       Q145.       L1.0         30.         .12         3.4        138.
   MEDIAN 50TH             132.          5.        154.       L1.0         35.         .13         3.9        148.
          75TH             136.         Q5.       Q164.       L1.0         40.         .14         4.4        159.
          90TH             147.         Q5.       Q169.        L0.         45.         .15         5.0        167.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE   2                           NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                              SURFACE WATER DATA
STATION 00AL05DF2069    LAT. 53D 22M 19S  LONG. 113D 44M 50S   PR 3   UTM 12 317250E 5916950N  FOR MAY 19, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER                         UPSTREAM OF DEVON BRIDGE
 COMPOSITE SAMPLE -  LEFT,CENTRE,RIGHT

                           20110L      12102L       11103L      19103L       15406L       15419L       07403L       07602L
                          CALCIUM    MAGNESIUM      SODIUM    POTASSIUM   PHOSPHOROUS  PHOSPHORUS    NITROGEN     NITROGEN
                         DISSOLVED   DISSOLVED    DISSOLVED   DISSOLVED      TOTAL        TOTAL     TOTAL ORG.      TOTAL
                                                                           PHOSPHATE    PHOSPHATE    (CALCD.)     (CALCD.)
                   SUBM      CA          MG           NA          K            P            P            N            N
                    ID      MG/L        MG/L         MG/L        MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             24(0)       24(0)        24(0)       24(0)        10(0)        12(1)        12(12)       24(23)
           LOW               32.          8.           3.          .5         .011        L.006        Q.100        Q.150
          HIGH               48.         14.           7.         1.1         .123         .062        Q.200        Q.650
       AVERAGE               41.         11.2         4.3          .8         .038         .022*                     .402*
      STD.DEV.                4.          1.3         1.0          .2         .036         .016*                     .170*
  PERCNT:10TH                37.         10.           3.          .5         .014         .008        Q.100        Q.190
          25TH               38.         10.0         4.0          .7         .017         .010         .100         .230
   MEDIAN 50TH               41.         11.0         4.0          .8         .022         .018         .100         .460
          75TH               44.         12.0         5.0          .9         .049         .029         .100         .550
          90TH               47.         12.0         5.           1.0        .101         .032        Q.100        Q.550
SECONDARY CODE                                                                           21L

                           07021L      07503L       07562L      07205L       07206L       07105L       07906L       10407L
                          NITROGEN    NITROGEN     NITROGEN    NITROGEN     NITROGEN     NITROGEN     NITROGEN     RESIDUE
                            TOTAL       TOTAL      DISSOLVED   DISSOLVED    DISSOLVED    DISSOLVED  PARTICULATE NONFILTRABLE
                          KJELDAHL     AMMONIA      AMMONIA     NITRITE      NITRITE     NO3 & NO2      TOTAL
                   SUBM      N            N            N           N            N            N            N
                    ID      MG/L        MG/L         MG/L        MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             24(11)      12(12)       12(1)       24(24)       12(11)       24(22)       16(9)        17(0)
           LOW              .100        L.4         L.002       L.05         L.007        L.05         L.01           4.
          HIGH              .6          L.4          .025       L.050         .009         .070         .83          64.
       AVERAGE              .350*                    .010*                    .007*        .052*        .076*        16.
      STD.DEV.              .170*                    .006*                    .001*        .006*        .203*        15.
  PERCNT:10TH               .140        L.4          .006       L.05         L.007        L.05         L.01           5.
          25TH              .170        L.40         .007       L.050        L.007        L.050        L.010          7.
   MEDIAN 50TH              .410*       L.40         .009       L.050        L.007        L.050        L.010         11.
          75TH             L.500        L.40         .011       L.050        L.007        L.050         .035         24.
          90TH             L.5          L.4          .020       L.05         L.007        L.050         .10          28.
SECONDARY CODE           01L

                           10474L      10453L       00205L      36001L       36011L       36102L       36910L       29009L
                          RESIDUE     RESIDUE       TOTAL     COLIFORMS    COLIFORMS     STREP.     STD. PLATE     COPPER
                           TOTAL     FILTRABLE    DISSOLVED     TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                   SOLIDS                                           BACT.DENS.
                   SUBM                                         MPN          MPN          MF                         CU
                    ID      MG/L        MG/L         MG/L     NO/100ML     NO/100ML     NO/100ML      NO/ML         MG/L
SAMPLES(FLAGS)             17(0)       17(0)        24(0)       21(1)        21(3)        21(1)        20(0)        24(10)
           LOW              208.        180.         120.        L10.          L2.          L2.          12.        L.001
          HIGH              354.        340.         204.        450.         120.         350.       20000.         .016
       AVERAGE              267.        251.         172.         92.*         20.*         57.*       1286.         .003*
      STD.DEV.               47.         44.          17.        119.*         28.*         87.*       4423.         .003*
  PERCNT:10TH               210.        200.         156.         10.           2.           2.          33.        L.001
          25TH              244.        230.         162.         28.           4.           6.          61.        L.001
   MEDIAN 50TH              247.        240.         172.         56.          10.          18.         120.         .003
          75TH              284.        270.         184.         70.          22.          50.         465.         .004
          90TH              345.        320.         191.        230.          48.         180.        1290.         .006
SECONDARY CODE                                               02L          12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE   3                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                      SURFACE WATER DATA
STATION 00AL05DF2069    LAT. 53D 22M 19S  LONG. 113D 44M 50S   PR 3   UTM 12 317250E 5916950N  FOR MAY 19, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER                UPSTREAM OF DEVON BRIDGE
 COMPOSITE SAMPLE -  LEFT,CENTRE,RIGHT

                           30009L     26304L     13306L      25003L      28009L      42009L      27009L      33005L
                            ZINC       IRON      ALUMINUM   MANGANESE    NICKEL    MOLYBDENUM    COBALT      ARSENIC
                           TOTAL     EXTRBLE.    EXTRBLE.    TOTAL       TOTAL       TOTAL       TOTAL      TOTAL

                   SUBM     ZN         FE          AL          MN          NI          MO          CO          AS
                    ID     MG/L       MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            24(1)      24(6)       20(1)       21(8)       24(3)       20(20)      24(21)      15(2)
          LOW             L.001        .05       L.020       L.008       L.001       L.001       L.001      L.0002
         HIGH              .043       1.04       3.050        .087        .040       L.001        .012       .0011
      AVERAGE              .018*       .29        .396*       .018*       .006*                   .002*      .0005*
     STD.DEV.              .015*       .27        .685*       .018*       .008*                   .002*      .0002*
  PERCNT:10TH              .003        .08        .052       L.008       L.001       L.001       L.001      L.0002
         25TH              .005        .12        .084       L.008        .003       L.001       L.001       .0003
  MEDIAN 50TH              .013        .17        .149        .010        .004       L.001       L.001       .0004
         75TH              .033        .37        .308        .020        .006       L.001       L.001       .0006
         90TH              .040        .58        .946        .030        .011       L.001        .003       .0007
SECONDARY CODE

                           04304L     48009L     24009L      82302L      82009L      80015L      34005L      23009L
                          BERYLLIUM   CADMIUM    CHROMIUM     LEAD        LEAD       MERCURY     SELENIUM    VANADIUM
                           EXTRBLE.    TOTAL      TOTAL      EXTRBLE.     TOTAL       TOTAL      TOTAL        TOTAL

                   SUBM     BE         CD          CR          PB          PB          HG          SE          V
                    ID     MG/L       MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            20(20)     24(14)      24(7)        9(7)       12(9)       12(12)      15(13)      20(8)
          LOW             L.001      L.001       L.001       L.003       L.003       L.0001      L.0002      L.002
         HIGH             L.001       .007        .044        .004        .014       L.0001       .0004       .010
      AVERAGE                         .002*       .006*       .003*       .004*                   .0002*      .004*
     STD.DEV.                         .002*       .009*       .000*       .003*                   .0001*      .002*
  PERCNT:10TH             L.001      L.001       L.001                   L.003       L.0001      L.0002      L.002
         25TH             L.001      L.001       L.001       L.003       L.003       L.0001      L.0002      L.002
  MEDIAN 50TH             L.001      L.001        .004       L.003       L.003       L.0001      L.0002       .003
         75TH             L.001       .004        .005       L.003        .003*      L.0001      L.0002       .004
         90TH             L.001       .005        .009                    .006       L.0001       .0003       .006
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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NAQUADAT SUMMARY REPORT APR 30, 1986
SURFACE WATER DATA

STATION 00AL05DF2075 LAT. 53D 28M 33S LONG. 113D 37M 10S PR 3 UTM 12 326150E 5928200N FOR MAY 19, 1982 TO NOV 02, 1982
NORTH SASKATCHEWAN RIVER UPSTREAM OF E.L. SMITH PUMP HOUSE
COMPOSITE SAMPLE - LEFT,CENTRE,RIGHT

SUBM ID	97251F DEPTH OF SAMPLING	02065F TEMPERATURE WATER	08102F OXYGEN DISSOLVED	02042F SPECIFIC CONDUCT.	02041L SPECIFIC CONDUCT.	10301L PH	08202L OXYGEN BIOCHEM. DEMAND-BOD	08301L OXYGEN TOTAL COD
	FROM SURF. M	DEG.C	O2 MG/L	USIE/CM	US/CM	PH UNITS	O2 MG/L	O2 MG/L
SAMPLES(FLAGS)	12(0)	12(0)	12(0)	11(0)	12(0)	12(0)	12(0)	12(0)
LOW	1.7	.5	7.8	300.	260.	8.2	.5	6.5
HIGH	5.5	20.	15.0	410.	365.	8.5	3.5	23.
AVERAGE	3.5	13.7	10.3	348.	314.		1.6	12.3
STD.DEV.	1.1	6.4	2.3	35.	27.		.9	4.9
PERCNT:10TH	2.3	4.	8.2	310.	288.	8.2	.7	8.8
25TH	2.7	9.5	8.9	315.	302.	8.3	.8	8.9
MEDIAN 50TH	3.4	15.8	9.1	340.	315.	8.4	1.2	11.0
75TH	4.4	18.5	12.1	375.	331.	8.4	2.3	14.0
90TH	4.6	18.8	13.4	390.	337.	8.5	2.7	20.
SECONDARY CODE								

SUBM ID	06536L PHENOLIC MATERIAL PHENOL	06005L CARBON TOTAL ORGANIC	06154L CARBON DISSOLVED INORGANIC	06107L CARBON DISSOLVED ORGANIC	06905L CARBON PARTICULATE TOTAL	06715L CHLORO - PHYLL A	06721L CHLOROPHYLL -A- EPILITHON	10151L ALKALINITY PHENOL PHTHALEIN
	MG/L	C MG/L	C MG/L	C MG/L	C MG/L	MG/M3	MG/M2	CACO3 MG/L
SAMPLES(FLAGS)	12(9)	11(0)						12(8)
LOW	L.002	5.						.0
HIGH	.003	11.						L4.2
AVERAGE	.002*	8.3						2.8*
STD.DEV.	.000*	2.2						2.1*
PERCNT:10TH	L.002	6.						0.
25TH	L.002	6.4						.0
MEDIAN 50TH	L.002	7.6						L4.2
75TH	.002*	10.						L4.2
90TH	.002	11.						L4.2
SECONDARY CODE								

SUBM ID	10101L ALKALINITY TOTAL	06301L CARBONATE (CALCD.)	06201L BICARBONT. (CALCD.)	17203L CHLORIDE DISSOLVED	16306L SULPHATE DISSOLVED	09107L FLUORIDE DISSOLVED	14102L SILICA REACTIVE	10602L HARDNESS TOTAL (CALCD.)
	CACO3 MG/L	CO3 MG/L	HCO3 MG/L	CL MG/L	SO4 MG/L	F MG/L	SIO2 MG/L	CACO3 MG/L
SAMPLES(FLAGS)	12(0)	12(8)	12(8)	12(11)	12(0)	12(0)	12(0)	12(0)
LOW	113.	0.	Q128.	L0.	20.	.11	3.0	115.
HIGH	151.	Q5.	178.	1.	40.	.15	5.6	159.
AVERAGE	132.	3.*	154.*	1.0*	31.	.13	4.1	142.
STD.DEV.	11.	2.*	14.*	.0*	6.	.01	.7	12.
PERCNT:10TH	116.	0.	141.	L0.	25.	.12	3.2	134.
25TH	127.	0.	145.	L1.0	26.	.12	3.7	136.
MEDIAN 50TH	130.	5.	155.	L1.0	30.	.12	4.0	142.
75TH	140.	5.	161.	L1.0	35.	.14	4.5	153.
90TH	146.	Q5.	Q174.	L0.	40.	.14	5.0	157.
SECONDARY CODE								

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0004 -  0006 PAGE   5                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                     SURFACE WATER DATA
STATION 00AL05DF2075    LAT. 53D 28M 33S  LONG. 113D 37M 10S   PR 3   UTM 12 326150E 5928200N  FOR MAY 19, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER                  UPSTREAM OF E.L. SMITH PUMP HOUSE
 COMPOSITE SAMPLE -  LEFT,CENTRE,RIGHT

                            20110L      12102L      11103L      19103L      15406L      15419L      07403L      07602L
                           CALCIUM    MAGNESIUM     SODIUM    POTASSIUM  PHOSPHOROUS  PHOSPHORUS   NITROGEN    NITROGEN
                          DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED     TOTAL       TOTAL     TOTAL ORG.    TOTAL
                                                                          PHOSPHATE   PHOSPHATE    (CALCD.)    (CALCD.)
                    SUBM     CA          MG          NA          K           P           P           N           N
                     ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             12(0)       12(0)       12(0)       12(0)       10(0)        5(0)      12(12)      12(12)
           LOW               33.          8.          2.          .5        .009        .009      Q.100       Q.550
          HIGH               44.         12.          5.          .9        .106        .024      Q.100       Q.550
       AVERAGE               40.        10.3         4.0          .8        .038        .017
      STD.DEV.                3.         1.2         1.0          .1        .036        .006
  PERCNT:10TH                37.          9.          3.          .7        .011                  Q.100       Q.550
          25TH               38.        10.0         3.5          .8        .015        .015       .100        .550
   MEDIAN 50TH               40.        10.0         4.0          .8        .021        .016       .100        .550
          75TH               44.        11.0         5.0          .9        .048        .023       .100        .550
          90TH               44.         12.          5.          .9        .103                  Q.100       Q.550
SECONDARY CODE                                                                         21L

                            07021L      07503L      07562L      07205L      07206L      07105L      07906L      10407L
                           NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    RESIDUE
                            TOTAL       TOTAL     DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED  PARTICULATE NONFILTRABLE
                           KJELDAHL    AMMONIA     AMMONIA     NITRITE     NITRITE    NO3 & NO2    TOTAL
                    SUBM      N           N           N           N           N           N           N
                     ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              12(7)      12(12)        5(0)      12(12)      12(12)      12(12)                   5(0)
           LOW               .090         L.4        .008        L.05       L.001        L.05                     6.
          HIGH               L.5          L.4        .018        L.05       L.007        L.05                    21.
       AVERAGE               .357*                   .013                                                        11.
      STD.DEV.               .181*                   .005                                                         6.
  PERCNT:10TH                .100         L.4                    L.05       L.007        L.05
          25TH               .165        L.40        .009       L.050       L.007       L.050                     7.
   MEDIAN 50TH              L.500        L.40        .011       L.050       L.007       L.050                    11.
          75TH              L.500        L.40        .017       L.050       L.007       L.050                    12.
          90TH               L.5          L.4                    L.05       L.007        L.05
SECONDARY CODE              01L

                            10474L      10453L      00205L      36001L      36011L      36102L      36910L      29009L
                           RESIDUE     RESIDUE      TOTAL     COLIFORMS   COLIFORMS     STREP.   STD. PLATE    COPPER
                            TOTAL     FILTRABLE   DISSOLVED     TOTAL       FECAL       FECAL       COUNT       TOTAL
                                                   SOLIDS                                        BACT.DENS.
                    SUBM                                         MPN         MPN         MF                     CU
                     ID     MG/L        MG/L        MG/L     NO/100ML    NO/100ML    NO/100ML      NO/ML       MG/L
SAMPLES(FLAGS)               5(0)        5(0)       12(0)       11(1)       11(0)       11(0)        9(0)      12(3)
           LOW               221.        200.        134.         10.          2.          2.         14.      L.001
          HIGH               356.        350.        184.        290.         60.        400.        750.       .006
       AVERAGE               269.        258.        166.        89.*         17.         74.        204.       .003*
      STD.DEV.                54.         58.         14.        93.*         16.        114.        272.       .002*
  PERCNT:10TH                                        154.         16.          2.          4.                  L.001
          25TH               227.        220.        159.         16.          8.          6.         40.       .001*
   MEDIAN 50TH               262.        250.        168.         40.         18.         50.         66.       .003
          75TH               281.        270.        178.        150.         22.         76.        160.       .004
          90TH                                       183.        220.         24.        110.                   .005
SECONDARY CODE                                               02L         12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE   6                   NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                     SURFACE WATER DATA
STATION 00AL05DF2075    LAT. 53D 28M 33S  LONG. 113D 37M 10S   PR 3   UTM 12 326150E 5928200N  FOR MAY 19, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER                  UPSTREAM OF E.L. SMITH PUMP HOUSE
 COMPOSITE SAMPLE -  LEFT,CENTRE,RIGHT

                      30009L     26304L     13306L     25003L     28009L     42009L     27009L     33005L
                       ZINC       IRON     ALUMINUM   MANGANESE   NICKEL   MOLYBDENUM   COBALT    ARSENIC
                       TOTAL     EXTRBLE.   EXTRBLE.    TOTAL      TOTAL      TOTAL      TOTAL     TOTAL

               SUBM     ZN         FE         AL         MN         NI         MO         CO         AS
                ID     MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)         12(1)      12(0)       8(0)       9(3)      12(0)       8(7)      12(11)      6(1)
           LOW         L.001        .08       .088      L.008       .004      L.001      L.001     L.0002
          HIGH          .048       1.21      2.680       .084       .012       .004       .005      .0005
       AVERAGE          .027*       .37       .645       .022*      .006       .001*      .001*     .0004*
      STD.DEV.          .014*       .35       .855       .024*      .003       .001*      .001*     .0001*
   PERCNT:10TH          .011        .13                             .004                 L.001
          25TH          .016        .16       .178      L.008       .004      L.001      L.001      .0003
   MEDIAN 50TH          .029        .23       .375       .012       .005      L.001      L.001      .0004
          75TH          .036        .43       .642       .025       .008      L.001      L.001      .0004
          90TH          .046        .88                             .009                 L.001
SECONDARY CODE
                      04304L     48009L     24009L     82302L     82009L     80015L     34005L     23009L
                     BERYLLIUM   CADMIUM   CHROMIUM     LEAD       LEAD      MERCURY   SELENIUM   VANADIUM
                      EXTRBLE.    TOTAL      TOTAL     EXTRBLE.    TOTAL      TOTAL     TOTAL      TOTAL

               SUBM     BE         CD         CR         PB         PB         HG         SE         V
                ID     MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)          8(8)      12(8)      12(1)                 12(8)                  6(6)       8(2)
           LOW         L.001      L.001      L.001                 L.003                L.0002      L.002
          HIGH         L.001       .003       .014                  .022                L.0002       .009
       AVERAGE                     .001*      .006*                 .005*                            .004*
      STD.DEV.                     .001*      .004*                 .005*                            .002*
   PERCNT:10TH                    L.001       .003                 L.003
          25TH         L.001      L.001       .004                 L.003                L.0002       .002*
   MEDIAN 50TH         L.001      L.001       .005                 L.003                L.0002       .003
          75TH         L.001       .002       .007                  .004                L.0002       .006
          90TH                     .003       .012                  .004
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE   7                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                    SURFACE WATER DATA
STATION 00AL05DF2110    LAT. 53D 30M 21S  LONG. 113D 33M 24S   PR 4   UTM 12 330400E 5931300N  FOR JUN 14, 1982 TO NOV 15, 1983
 WHITEMUD CREEK - NEAR THE MOUTH             AT CONFLUENCE WITH NSR

                          97251F       02065F       08102F       02042F       02041L       10301L       08202L       08301L
                         DEPTH OF   TEMPERATURE     OXYGEN      SPECIFIC     SPECIFIC        PH         OXYGEN       OXYGEN
                         SAMPLING      WATER      DISSOLVED     CONDUCT.     CONDUCT.                  BIOCHEM.    TOTAL COD
                                                                                                     DEMAND-BOD
                  SUBM  FROM SURF.                   O2                                                  O2           O2
                   ID       M          DEG.C        MG/L        USIE/CM       US/CM      PH UNITS       MG/L         MG/L
SAMPLES(FLAGS)             7(0)         9(0)        8(0)          8(0)        10(0)        10(0)        9(0)         9(0)
           LOW               .3          5.5         5.4          415.         406.          7.6         1.8         15.9
          HIGH              1.0         22.5        13.0         1350.        1478.          8.4         7.4        189.4
       AVERAGE               .5         15.8         9.0          807.         809.                      4.1         68.5
      STD.DEV.               .3          5.6         2.1          337.         405.                      2.0         52.3
  PERCNT:10TH                                                                  424.          7.7
          25TH               .3         15.          8.2          510.         471.          7.9         2.6         34.9
   MEDIAN 50TH               .3         16.0         8.8          810.         724.          8.1         4.0         58.4
          75TH               .6         19.0         9.6         1025.        1056.          8.2         4.6         90.0
          90TH                                                                1452.          8.3
SECONDARY CODE                                                                                                      04L

                          06536L       06005L       06154L       06107L       06905L       06715L       06721L       10151L
                         PHENOLIC      CARBON       CARBON       CARBON       CARBON      CHLORO -   CHLOROPHYLL  ALKALINITY
                         MATERIAL      TOTAL      DISSOLVED    DISSOLVED   PARTICULATE   PHYLL A         -A-        PHENOL
                          PHENOL      ORGANIC     INORGANIC     ORGANIC       TOTAL                  EPILITHON   PHTHALEIN
                  SUBM                   C            C            C            C                                  CACO3
                   ID     MG/L         MG/L         MG/L         MG/L         MG/L        MG/M3        MG/M2        MG/L
SAMPLES(FLAGS)            10(0)                     10(0)        10(0)        10(0)        9(0)                     10(1)
           LOW             .005                     24.0          4.6         1.00         3.50                        .0
          HIGH             .124                     76.0         30.0         6.31        37.02                      L4.2
       AVERAGE             .024                     53.7         17.4         3.32        14.79                        .4*
      STD.DEV.             .036                     19.6          8.1         1.98        11.38                       1.3*
  PERCNT:10TH              .007                     27.0          5.9         1.16                                     .0
          25TH             .009                     37.0         14.5         1.58         7.97                        .0
   MEDIAN 50TH             .013                     59.5         17.1         3.01        10.44                        .0
          75TH             .017                     69.0         21.0         4.50        20.62                        .0
          90TH             .074                     75.0         29.5         6.30                                    2.1*
SECONDARY CODE            37L

                          10101L       06301L       06201L       17203L       16306L       09107L       14102L       10602L
                        ALKALINITY   CARBONATE   BICARBONT.    CHLORIDE     SULPHATE     FLUORIDE      SILICA      HARDNESS
                          TOTAL       (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED    DISSOLVED    REACTIVE       TOTAL
                                                                                                                  (CALCD.)
                  SUBM    CACO3         CO3         HCO3           CL          SO4           F          SIO2         CACO3
                   ID     MG/L         MG/L        MG/L          MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            10(0)        10(1)        10(1)        10(0)         9(0)        10(0)        10(0)        10(0)
           LOW             102.           0.         124.           5.          55.          .08          1.7         128.
          HIGH             333.          Q5.         406.          79.         455.          .33         12.4         545.
       AVERAGE             221.           1.*        268.*        21.3         158.          .24          5.1         280.
      STD.DEV.              80.           2.*         98.*        22.0         127.          .08          3.4         147.
  PERCNT:10TH              107.           0.         130.          6.0                       .13          1.7         139.
          25TH             159.           0.         194.           8.          78.          .20          2.6         167.
   MEDIAN 50TH             243.           0.         290.         14.5         115.          .24          4.3         237.
          75TH             277.           0.         338.          26.         161.          .32          7.2         347.
          90TH             313.           3.         382.         52.5                       .33          9.8         530.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE   8                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                      SURFACE WATER DATA
STATION 00AL05DF2110    LAT. 53D 30M 21S  LONG. 113D 33M 24S   PR 4   UTM 12 330400E 5931300N  FOR JUN 14, 1982 TO NOV 15, 1983
 WHITEMUD CREEK - NEAR THE MOUTH           AT CONFLUENCE WITH NSR

                      20110L         12102L         11103L         19103L         15406L         15419L         07403L         07602L
                      CALCIUM        MAGNESIUM      SODIUM         POTASSIUM      PHOSPHOROUS    PHOSPHORUS     NITROGEN       NITROGEN
                      DISSOLVED      DISSOLVED      DISSOLVED      DISSOLVED      TOTAL          TOTAL          TOTAL ORG.     TOTAL
                                                                                  PHOSPHATE      PHOSPHATE      (CALCD.)       (CALCD.)
                SUBM  CA             MG             NA             K              P              P              N              N
                 ID   MG/L           MG/L           MG/L           MG/L           MG/L           MG/L           MG/L           MG/L
      SAMPLES(FLAGS)  10(0)          10(0)          10(0)          10(0)                         9(0)                          10(6)
                 LOW  38.            8.             21.            2.7                           .055                          Q.550
                HIGH  139.           48.            129.           14.0                          1.030                         3.640
             AVERAGE  75.            22.4           62.9           9.4                           .362                          1.963*
            STD.DEV.  38.            13.1           38.2           3.9                           .343                          1.108*
         PERCNT:10TH  39.            10.0           22.5           3.0                                                         .625
                25TH  47.            12.            32.            7.8                           .070                          Q1.070
         MEDIAN 50TH  65.            18.5           57.0           10.1                          .280                          1.745
                75TH  91.            29.            97.            12.0                          .420                          Q2.900
                90TH  139.           44.5           115.0          13.5                                                        3.520
      SECONDARY CODE                                                                             21L

                      07021L         07503L         07562L         07205L         07206L         07105L         07906L         10407L
                      NITROGEN       NITROGEN       NITROGEN       NITROGEN       NITROGEN       NITROGEN       NITROGEN       RESIDUE
                      TOTAL          TOTAL          DISSOLVED      DISSOLVED      DISSOLVED      DISSOLVED      PARTICULATE    NONFILTRABLE
                      KJELDAHL       AMMONIA        AMMONIA        NITRITE        NITRITE        NO3 & NO2      TOTAL
                SUBM  N              N              N              N              N              N              N
                 ID   MG/L           MG/L           MG/L           MG/L           MG/L           MG/L           MG/L           MG/L
      SAMPLES(FLAGS)  10(0)                         9(0)           9(7)                          10(6)          9(3)           10(0)
                 LOW  .500                          .013           L.05                          L.05           L.01           9.
                HIGH  3.250                         .310           .08                           .48            1.09           753.
             AVERAGE  1.771                         .092           .054*                         .192*          .351*          116.
            STD.DEV.  1.012                         .110           .010*                         .186*          .370*          229.
         PERCNT:10TH  .575                                                                       L.050                         12.
                25TH  1.020                         .022           L.05                          L.05           L.01           17.
         MEDIAN 50TH  1.580                         .032           L.05                          L.050          .24            24.
                75TH  2.850                         .124           L.05                          .39            .59            122.
                90TH  3.125                                                                      .440                          454.
      SECONDARY CODE

                      10474L         10453L         00205L         36001L         36011L         36102L         36910L         29009L
                      RESIDUE        RESIDUE        TOTAL          COLIFORMS      COLIFORMS      STREP.         STD. PLATE     COPPER
                      TOTAL          FILTRABLE      DISSOLVED      TOTAL          FECAL          FECAL          COUNT          TOTAL
                                                    SOLIDS                                                      BACT.DENS.
                SUBM                                               MPN            MPN            MF                            CU
                 ID   MG/L           MG/L           MG/L           NO/100ML       NO/100ML       NO/100ML       NO/ML          MG/L
      SAMPLES(FLAGS)  10(0)          10(0)          10(0)          9(0)           9(1)           9(1)           9(0)           10(1)
                 LOW  365.           340.           228.           80.            L10.           L10.           440.           L.001
                HIGH  1113.          1090.          977.           17000.         3100.          1300.          25000.         .029
             AVERAGE  718.           613.           504.           2833.          528.*          210.*          5688.          .010*
            STD.DEV.  291.           281.           283.           5361.          972.*          410.*          7971.          .011*
         PERCNT:10TH  367.           350.           247.                                                                       .001*
                25TH  489.           360.           272.           500.           170.           56.            800.           .002
         MEDIAN 50TH  644.           535.           431.           1200.          240.           80.            3600.          .004
                75TH  1054.          810.           667.           1800.          350.           110.           4800.          .012
                90TH  1108.          1065.          967.                                                                       .028
      SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE   9                      NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                      SURFACE WATER DATA
STATION 00AL05DF2110    LAT. 53D 30M 21S  LONG. 113D 33M 24S   PR 4   UTM 12 330400E 5931300N  FOR JUN 14, 1982 TO NOV 15, 1983
 WHITEMUD CREEK - NEAR THE MOUTH          AT CONFLUENCE WITH NSR

                        30009L      26304L      13306L      25003L      28009L      42009L      27009L      33005L
                         ZINC        IRON      ALUMINUM   MANGANESE     NICKEL    MOLYBDENUM    COBALT     ARSENIC
                        TOTAL      EXTRBLE.    EXTRBLE.     TOTAL       TOTAL       TOTAL       TOTAL      TOTAL

                 SUBM     ZN          FE          AL          MN          NI          MO          CO          AS
                  ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)          10(0)       10(0)       10(0)       10(0)       10(0)        9(7)       10(6)       10(0)
           LOW           .006         .15        .035        .061        .003       L.001       L.001       .0008
          HIGH           .090        9.22       8.830        .370        .030        .008        .010       .0100
       AVERAGE           .035        1.75        .983        .219        .014        .002*       .003*      .0035
      STD.DEV.           .034        2.78       2.759        .096        .008        .002*       .003*      .0027
  PERCNT:10TH            .007         .26        .043        .090        .005                   L.001       .0010
          25TH           .009         .47        .065        .172        .010       L.001       L.001       .0016
   MEDIAN 50TH           .018         .66        .076        .218        .012       L.001       L.001       .0029
          75TH           .080        1.37        .200        .259        .018       L.001        .003       .0043
          90TH           .086        6.29       4.588        .362        .028                    .008       .0078
SECONDARY CODE
                        04304L      48009L      24009L      82302L      82009L      80015L      34005L      23009L
                      BERYLLIUM    CADMIUM     CHROMIUM      LEAD        LEAD      MERCURY    SELENIUM    VANADIUM
                       EXTRBLE.     TOTAL       TOTAL      EXTRBLE.     TOTAL       TOTAL      TOTAL       TOTAL

                 SUBM     BE          CD          CR          PB          PB          HG          SE          V
                  ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)          10(10)      10(5)       10(1)        9(3)                   10(10)       9(8)       10(1)
           LOW          L.001       L.001       L.001       L.003                   L.0001      L.0002       L.002
          HIGH          L.001        .010        .015        .073                   L.0001       .0004        .028
       AVERAGE                       .002*       .006*       .017*                               .0002*       .008*
      STD.DEV.                       .003*       .004*       .023*                               .0001*       .008*
  PERCNT:10TH           L.001       L.001        .002*                              L.0001                    .002*
          25TH          L.001       L.001        .004       L.003                   L.0001      L.0002        .004
   MEDIAN 50TH          L.001        .001*       .005        .005                   L.0001      L.0002        .006
          75TH          L.001        .002        .007        .018                   L.0001      L.0002        .007
          90TH          L.001        .007        .012                               L.0001                    .020
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  10                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                      SURFACE WATER DATA
STATION 00AL05EA1020    LAT. 53D 47M 15S  LONG. 113D 13M 21S   PR 4   UTM 12 353600E 5961900N  FOR MAY 26, 1983 TO NOV 17, 1983
 STURGEON RIVER - MOUTH

                            97251F        02065F        08102F        02042F        02041L        10301L        08202L        08301L
                           DEPTH OF    TEMPERATURE      OXYGEN       SPECIFIC      SPECIFIC         PH          OXYGEN        OXYGEN
                           SAMPLING       WATER       DISSOLVED      CONDUCT.      CONDUCT.                    BIOCHEM.     TOTAL COD
                                                                                                              DEMAND-BOD
                  SUBM    FROM SURF.                      02                                                      02            02
                   ID         M           DEG.C          MG/L        USIE/CM        US/CM        PH UNITS        MG/L          MG/L
    SAMPLES(FLAGS)            6(0)          9(0)          9(0)          9(0)          9(0)          9(0)          6(0)          9(0)
               LOW              .1            .3           6.7          420.          396.           7.7           1.6          43.4
              HIGH             1.8          23.0          13.8         1000.         1188.           8.5           6.5          74.0
           AVERAGE              .6          15.7           9.8          638.          629.                         3.3          59.4
          STD.DEV.              .6           7.2           2.4          174.          229.                         1.8           9.8
       PERCNT:10TH
              25TH              .3           14.           7.8          575.          532.           7.9           1.8          52.8
       MEDIAN 50TH              .3          19.5           9.7          600.          571.           8.2           3.0          58.3
              75TH              .6           20.          11.3          670.          639.           8.4           3.7          65.8
              90TH
    SECONDARY CODE                                                                                                             04L

                            06536L        06005L        06154L        06107L        06905L        06715L        06721L        10151L
                           PHENOLIC       CARBON        CARBON        CARBON        CARBON       CHLORO -    CHLOROPHYLL    ALKALINITY
                           MATERIAL       TOTAL       DISSOLVED     DISSOLVED    PARTICULATE     PHYLL A         -A-          PHENOL
                            PHENOL       ORGANIC      INORGANIC      ORGANIC        TOTAL                     EPILITHON     PHTHALEIN
                  SUBM                      C             C             C             C                                     CACO3
                   ID        MG/L          MG/L          MG/L          MG/L          MG/L         MG/M3         MG/M2          MG/L
    SAMPLES(FLAGS)            9(0)                        9(0)          9(0)          9(0)          9(0)                        9(1)
               LOW            .007                        25.0          14.0          1.22          5.38                          .0
              HIGH            .012                        63.0          23.0         17.15        114.51                         6.7
           AVERAGE            .009                        46.7          16.9          4.88         28.70                         1.7*
          STD.DEV.            .002                        11.7           2.9          5.00         34.31                         2.6*
       PERCNT:10TH
              25TH            .008                        42.0          15.0          2.20         12.03                          .0
       MEDIAN 50TH            .008                        47.0          16.0          2.70         14.17                          .0
              75TH            .008                        55.0          19.0          4.80         21.48                        L4.2
              90TH
    SECONDARY CODE             37L

                            10101L        06301L        06201L        17203L        16306L        09107L        14102L        10602L
                          ALKALINITY    CARBONATE     BICARBONT.     CHLORIDE      SULPHATE      FLUORIDE       SILICA       HARDNESS
                            TOTAL        (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED     DISSOLVED      REACTIVE        TOTAL
                                                                                                                             (CALCD.)
                  SUBM      CACO3          CO3           HCO3           CL           SO4            F            SIO2         CACO3
                   ID        MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
    SAMPLES(FLAGS)            9(0)          9(1)          9(1)          9(0)          9(0)          9(0)          9(2)          9(0)
               LOW            104.            0.          127.            4.           55.           .17           L.5          134.
              HIGH            259.            8.          316.           38.          285.           .38           9.1          360.
           AVERAGE            192.            2.*         230.*         10.3          115.           .21           3.9*         211.
          STD.DEV.             47.            3.*          56.*         10.6           70.           .07           2.9*          67.
       PERCNT:10TH
              25TH            188.            0.          223.            6.           75.           .18           1.8          174.
       MEDIAN 50TH            198.            0.         Q231.            7.           90.           .19           3.1          207.
              75TH            217.            5.          265.            9.          115.           .20           5.8          210.
              90TH
    SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  11                     NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                     SURFACE WATER DATA
STATION 00AL05EA1020    LAT. 53D 47M 15S  LONG. 113D 13M 21S   PR 4   UTM 12 353600E 5961900N  FOR MAY 26, 1983 TO NOV 17, 1983
 STURGEON RIVER - MOUTH

                        20110L        12102L        11103L        19103L        15406L        15419L        07403L        07602L
                       CALCIUM      MAGNESIUM       SODIUM      POTASSIUM    PHOSPHOROUS    PHOSPHORUS     NITROGEN      NITROGEN
                      DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED       TOTAL         TOTAL      TOTAL ORG.      TOTAL
                                                                              PHOSPHATE     PHOSPHATE      (CALCD.)      (CALCD.)
               SUBM       CA            MG            NA            K             P             P             N             N
                ID       MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
      SAMPLES(FLAGS)       9(0)          9(0)          9(0)          9(0)                        8(0)                        9(3)
                 LOW        37.           10.           31.           6.1                        .090                      Q1.050
                HIGH        85.           36.          102.           9.7                        .780                       4.470
             AVERAGE        53.          19.1          47.0           8.0                        .258                       2.243*
            STD.DEV.        15.           7.5          21.9            .9                        .248                        .998*
         PERCNT:10TH
                25TH        45.           15.           36.           7.7                        .101                      Q1.500
         MEDIAN 50TH        52.           17.           38.           8.1                        .115                       2.250
                75TH        56.           20.           49.           8.2                        .383                       2.510
                90TH
      SECONDARY CODE                                                                          21L

                        07021L        07503L        07562L        07205L        07206L        07105L        07906L        10407L
                       NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      RESIDUE
                        TOTAL         TOTAL       DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED    PARTICULATE   NONFILTRABLE
                       KJELDAHL      AMMONIA       AMMONIA       NITRITE       NITRITE      NO3 & NO2       TOTAL
               SUBM       N             N             N             N             N             N             N
                ID       MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
      SAMPLES(FLAGS)       9(0)                        9(0)          9(8)                        9(3)          9(1)          9(0)
                 LOW      1.000                        .007          L.05                        L.05          L.01           10.
                HIGH      3.400                       1.040           .12                        1.07          1.17          104.
             AVERAGE      1.853                        .152          .058*                       .390*         .482*          45.
            STD.DEV.       .682                        .335          .023*                       .335*         .357*          41.
         PERCNT:10TH
                25TH      1.450                        .016          L.05                        L.05           .19           16.
         MEDIAN 50TH      1.800                        .029          L.05                         .42           .49           23.
                75TH      1.950                        .086          L.05                         .47           .69           96.
                90TH
      SECONDARY CODE

                        10474L        10453L        00205L        36001L        36011L        36102L        36910L        29009L
                       RESIDUE       RESIDUE        TOTAL      COLIFORMS     COLIFORMS       STREP.     STD. PLATE      COPPER
                        TOTAL      FILTRABLE     DISSOLVED       TOTAL         FECAL         FECAL         COUNT         TOTAL
                                                    SOLIDS                                                BACT.DENS.
               SUBM                                                MPN           MPN            MF                          CU
                ID       MG/L          MG/L          MG/L        NO/100ML      NO/100ML      NO/100ML       NO/ML          MG/L
      SAMPLES(FLAGS)       9(0)          9(0)          9(0)          8(0)          8(1)          8(0)          8(0)          9(2)
                 LOW       386.          290.          229.           12.           L2.            8.          380.         L.001
                HIGH       853.          830.          715.         3400.          400.          200.        15000.          .034
             AVERAGE       527.          482.          369.          620.           88.*          60.         4401.          .011*
            STD.DEV.       141.          164.          142.         1141.          137.*          69.         4885.          .012*
         PERCNT:10TH
                25TH       465.          400.          301.           69.           11.           14.          865.          .002
         MEDIAN 50TH       504.          450.          332.          180.           23.           28.         3250.          .007
                75TH       550.          540.          373.          525.          119.           95.         5800.          .019
                90TH
      SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  12                        NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                         SURFACE WATER DATA
STATION 00AL05EA1020    LAT. 53D 47M 15S  LONG. 113D 13M 21S   PR 4   UTM 12 353600E 5961900N  FOR MAY 26, 1983 TO NOV 17, 1983
 STURGEON RIVER - MOUTH

                             30009L       26304L       13306L       25003L       28009L       42009L       27009L       33005L
                              ZINC         IRON       ALUMINUM    MANGANESE      NICKEL     MOLYBDENUM     COBALT      ARSENIC
                             TOTAL       EXTRBLE.     EXTRBLE.      TOTAL        TOTAL        TOTAL        TOTAL      TOTAL

                     SUBM     ZN           FE           AL           MN           NI           MO           CO           AS
                      ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)                9(0)         9(0)         9(1)         9(0)         9(0)         8(7)         9(7)         7(0)
           LOW                .003          .19        L.020         .044         .006        L.001        L.001        .0012
          HIGH                .036         2.74        1.140         .196         .023         .006         .004        .0040
       AVERAGE                .020         1.10         .272*        .094         .013         .002*        .002*       .0024
      STD.DEV.                .013         1.00         .363*        .056         .006         .002*        .001*       .0010
   PERCNT:10TH
          25TH                .009          .44         .055         .052         .008        L.001        L.001        .0016
   MEDIAN 50TH                .018          .53         .130         .066         .014        L.001        L.001        .0024
          75TH                .032         2.02         .405         .141         .016        L.001        L.001        .0035
          90TH
SECONDARY CODE

                             04304L       48009L       24009L       82302L       82009L       80015L       34005L       23009L
                            BERYLLIUM     CADMIUM     CHROMIUM       LEAD         LEAD       MERCURY     SELENIUM     VANADIUM
                             EXTRBLE.      TOTAL        TOTAL       EXTRBLE.      TOTAL        TOTAL      TOTAL        TOTAL

                     SUBM     BE           CD           CR           PB           PB           HG           SE           V
                      ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)                9(8)         9(7)         9(3)         8(5)                      9(9)         7(7)         9(1)
           LOW               L.001        L.001        L.001        L.003                     L.0001       L.0002        L.002
          HIGH              60.001         .003         .027         .015                     L.0001       L.0002         .013
       AVERAGE               6.668*        .001*        .006*        .005*                                                .006*
      STD.DEV.              20.000*        .001*        .008*        .004*                                                .004*
   PERCNT:10TH
          25TH               L.001        L.001        L.001        L.003                     L.0001       L.0002         .003
   MEDIAN 50TH               L.001        L.001         .004        L.003                     L.0001       L.0002         .005
          75TH               L.001        L.001         .005         .006                     L.0001       L.0002         .009
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  13                      NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                       SURFACE WATER DATA
STATION 00AL05EB2121    LAT. 53D 31M 44S  LONG. 113D 29M 37S   PR 3   UTM 12 334750E 5933800N  FOR MAY 19, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER -  LEFT BANK      90M UPSTREAM OF ROSSDALE PLANT

                        97251F       02065F       08102F       02042F       02041L       10301L       08202L       08301L
                       DEPTH OF    TEMPERATURE    OXYGEN      SPECIFIC     SPECIFIC       PH          OXYGEN       OXYGEN
                       SAMPLING       WATER      DISSOLVED    CONDUCT.     CONDUCT.                  BIOCHEM.     TOTAL COD
                                                                                                   DEMAND-BOD
                 SUBM  FROM SURF.                   02                                                 02           02
                  ID       M          DEG.C        MG/L       USIE/CM       US/CM      PH UNITS       MG/L         MG/L
SAMPLES(FLAGS)           12(0)        12(0)        12(0)        11(0)        12(0)        12(0)        12(0)        12(0)
           LOW             1.2           1.          8.5         295.         263.          8.0           .5          6.1
          HIGH             4.3          20.          15.         410.         347.          8.6           3.          26.
       AVERAGE             2.2         14.1         10.4         353.         316.                        1.4         11.7
      STD.DEV.              .8          6.4          2.2          38.          24.                         .8          5.8
  PERCNT:10TH              1.6          4.5          8.6         310.         289.          8.2           .8          6.9
          25TH             1.8          9.9          8.7         315.         301.          8.3           .8          8.4
   MEDIAN 50TH             2.1         16.3          9.3         355.         322.          8.4          1.1          9.3
          75TH             2.4         18.8         11.9         385.         335.          8.4          2.2         14.5
          90TH             2.7         19.5         13.4         390.         336.          8.5          2.2          18.
SECONDARY CODE

                        06536L       06005L       06154L       06107L       06905L       06715L       06721L       10151L
                       PHENOLIC      CARBON       CARBON       CARBON       CARBON      CHLORO -   CHLOROPHYLL   ALKALINITY
                       MATERIAL      TOTAL      DISSOLVED    DISSOLVED   PARTICULATE    PHYLL A        -A-         PHENOL
                        PHENOL      ORGANIC     INORGANIC     ORGANIC       TOTAL                  EPILITHON     PHTHALEIN
                 SUBM                   C            C            C            C                                  CACO3
                  ID      MG/L        MG/L         MG/L         MG/L         MG/L        MG/M3        MG/M2        MG/L
SAMPLES(FLAGS)           12(7)        11(0)         4(0)         4(0)         4(0)                                12(8)
           LOW           L.002          4.4           2.          1.7          .13                                   .0
          HIGH            .003          13.         30.1           4.         1.99                                 L4.2
       AVERAGE           .002*          8.4         19.4          3.2          .96                                 2.8*
      STD.DEV.           .000*          2.7         13.5          1.0          .78                                 2.1*
  PERCNT:10TH            L.002           5.                                                                          .0
          25TH           L.002          6.8          8.8          2.5          .42                                   .0
   MEDIAN 50TH           L.002          7.5         22.8          3.5          .86                                 L4.2
          75TH            .002          11.         30.0          3.9         1.50                                 L4.2
          90TH            .003          11.                                                                        L4.2
SECONDARY CODE

                        10101L       06301L       06201L       17203L       16306L       09107L       14102L       10602L
                      ALKALINITY    CARBONATE   BICARBONT.    CHLORIDE     SULPHATE     FLUORIDE      SILICA      HARDNESS
                         TOTAL      (CALCD.)      (CALCD.)    DISSOLVED    DISSOLVED    DISSOLVED    REACTIVE       TOTAL
                                                                                                                 (CALCD.)
                 SUBM    CACO3         CO3         HCO3           CL          SO4           F          SIO2         CACO3
                  ID      MG/L        MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)           12(0)        12(8)        12(8)       11(10)        12(0)        12(0)        12(0)        12(0)
           LOW            113.           0.        Q128.          L0.          15.          .10          3.0         113.
          HIGH            148.          Q5.         177.           2.          40.          .17          5.6         169.
       AVERAGE            132.          3.*        154.*         1.1*          32.          .13          4.1         145.
      STD.DEV.             11.          2.*         14.*          .3*           7.          .02           .7          14.
  PERCNT:10TH             116.           0.         141.          L0.          25.          .12          3.2         136.
          25TH            127.           0.         145.          L0.          30.          .13          3.7         137.
   MEDIAN 50TH            132.           5.         155.          L0.          33.          .13          3.9         144.
          75TH            141.           5.         164.          L0.          35.          .14          4.5         155.
          90TH            145.          Q5.        Q170.          L0.          40.          .15          5.0         160.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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                                                           SURFACE WATER DATA
STATION 00AL05EB2121    LAT. 53D 31M 44S  LONG. 113D 29M 37S   PR 3   UTM 12 334750E 5933800N  FOR MAY 19, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER -  LEFT BANK     90M UPSTREAM OF ROSSDALE PLANT


                          20110L       12102L        11103L       19103L       15406L       15419L       07403L       07602L
                         CALCIUM     MAGNESIUM       SODIUM     POTASSIUM   PHOSPHOROUS  PHOSPHORUS    NITROGEN     NITROGEN
                        DISSOLVED    DISSOLVED     DISSOLVED    DISSOLVED      TOTAL        TOTAL     TOTAL ORG.     TOTAL
                                                                             PHOSPHATE    PHOSPHATE    (CALCD.)     (CALCD.)
                 SUBM       CA           MG            NA           K            P            P            N            N
                  ID      MG/L         MG/L          MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            12(0)        12(0)         12(0)        12(0)        10(0)                     12(12)       12(12)
           LOW              32.           8.            2.           .5         .012                     Q.100        Q.550
          HIGH              48.          12.            7.          1.0         .117                     Q.200        Q.650
       AVERAGE              41.         10.6           4.5           .8         .042
      STD.DEV.               4.          1.2           1.4           .1         .042
  PERCNT:10TH               38.          10.            3.           .7         .012                     Q.100        Q.550
          25TH              38.         10.0           3.5           .8         .015                      .100         .550
MEDIAN    50TH              40.         10.0           4.5           .9         .019                      .100         .550
          75TH              44.         12.0           5.5           .9         .065                      .100         .550
          90TH              46.          12.            6.           .9         .117                     Q.100        Q.550
SECONDARY CODE

                          07021L       07503L        07562L       07205L       07206L       07105L       07906L       10407L
                         NITROGEN     NITROGEN      NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     RESIDUE
                          TOTAL        TOTAL       DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED   PARTICULATE NONFILTRABLE
                         KJELDAHL     AMMONIA       AMMONIA      NITRITE      NITRITE     NO3 & NO2      TOTAL
                 SUBM       N            N             N            N            N            N            N
                  ID      MG/L         MG/L          MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            12(9)        12(12)                     12(12)       12(12)       12(12)        4(1)         5(0)
           LOW              L.5          L.4                       L.05        L.007         L.05         L.01           6.
          HIGH               .6          L.4                       L.05        L.007         L.05          .11          22.
       AVERAGE             .508*                                                                         .058*          13.
      STD.DEV.             .029*                                                                         .050*           8.
  PERCNT:10TH               L.5          L.4                       L.05        L.007         L.05
          25TH            L.500         L.40                      L.050        L.007        L.050        .015*           7.
MEDIAN    50TH            L.500         L.40                      L.050        L.007        L.050         .055          11.
          75TH             .500*        L.40                      L.050        L.007        L.050         .100          21.
          90TH               .5          L.4                       L.05        L.007         L.05
SECONDARY CODE            01L

                          10474L       10453L        00205L       36001L       36011L       36102L       36910L       29009L
                         RESIDUE      RESIDUE        TOTAL      COLIFORMS    COLIFORMS     STREP.     STD. PLATE     COPPER
                          TOTAL      FILTRABLE     DISSOLVED      TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                    SOLIDS                                            BACT.DENS.
                 SUBM                                               MPN          MPN           MF                      CU
                  ID      MG/L         MG/L          MG/L       NO/100ML     NO/100ML     NO/100ML       NO/ML        MG/L
SAMPLES(FLAGS)             5(0)         5(0)         12(0)        12(0)        12(0)        12(0)        11(0)        12(4)
           LOW             222.         200.          128.         160.          10.          20.          26.        L.001
          HIGH             286.         280.          192.        5500.        1000.         370.        8400.         .007
       AVERAGE             247.         234.          169.        1240.         172.         114.        1438.         .003*
      STD.DEV.              28.          34.           17.        1672.         284.         116.        2756.         .002*
  PERCNT:10TH                                         156.         160.          24.          30.          40.        L.001
          25TH             231.         210.          160.         195.          27.          44.          67.        L.001
MEDIAN    50TH             231.         220.          169.         350.          52.          65.         210.         .003
          75TH             267.         260.          182.        1850.         200.         120.         700.         .005
          90TH                                        185.        3300.         350.         330.        5200.         .006
SECONDARY CODE                                                     02L          12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  15                     NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                     SURFACE WATER DATA
STATION 00AL05EB2121    LAT. 53D 31M 44S  LONG. 113D 29M 37S   PR 3   UTM 12 334750E 5933800N  FOR MAY 19, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER -  LEFT BANK     90M UPSTREAM OF ROSSDALE PLANT

                          30009L       26304L       13306L       25003L       28009L       42009L       27009L       33005L
                           ZINC         IRON       ALUMINUM    MANGANESE      NICKEL     MOLYBDENUM     COBALT      ARSENIC
                          TOTAL       EXTRBLE.     EXTRBLE.      TOTAL        TOTAL        TOTAL        TOTAL       TOTAL

                SUBM       ZN           FE           AL           MN           NI           MO           CO           AS
                 ID       MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            12(1)        12(0)        8(0)         9(1)         12(0)        8(8)         12(10)       7(0)
           LOW            L.001          .04         .157        L.008         .003        L.001        L.001        .0003
          HIGH             .042         1.27        3.470         .106         .012        L.001         .005        .0010
       AVERAGE             .025*         .37         .929         .029*        .005                      .001*       .0006
      STD.DEV.             .014*         .38        1.084         .032*        .003                      .001*       .0003
   PERCNT:10TH             .006          .12                                   .003                     L.001
          25TH             .014          .17         .382         .010         .004        L.001        L.001        .0003
    MEDIAN 50TH            .029          .24         .508         .015         .005        L.001        L.001        .0004
          75TH             .036          .36        1.014         .040         .006        L.001        L.001        .0008
          90TH             .040         1.02                                   .010                      .003
SECONDARY CODE

                          04304L       48009L       24009L       82302L       82009L       80015L       34005L       23009L
                        BERYLLIUM     CADMIUM      CHROMIUM      LEAD         LEAD        MERCURY      SELENIUM     VANADIUM
                         EXTRBLE.      TOTAL        TOTAL       EXTRBLE.      TOTAL        TOTAL       TOTAL         TOTAL

                SUBM       BE           CD           CR           PB           PB           HG           SE           V
                 ID       MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            8(8)         12(8)        12(0)                     12(8)                     7(5)         8(3)
           LOW            L.001        L.001         .003                     L.003                     L.0002       L.002
          HIGH            L.001         .002         .053                      .018                      .0007        .012
       AVERAGE                          .001*        .010                      .005*                     .0003*       .004*
      STD.DEV.                          .000*        .014                      .005*                     .0002*       .003*
   PERCNT:10TH                         L.001         .003                     L.003
          25TH            L.001        L.001         .003                     L.003                     L.0002       L.002
    MEDIAN 50TH           L.001        L.001         .006                     L.003                     L.0002        .003
          75TH            L.001         .002         .009                      .005                      .0003        .005
          90TH                          .002         .016                      .012
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  16                        NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                          SURFACE WATER DATA
STATION 00AL05EB2122    LAT. 53D 31M 41S  LONG. 113D 29M 37S   PR 3   UTM 12 334700E 5933700N  FOR MAY 19, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER  -    CENTRE       90M UPSTREAM OF ROSSDALE PLANT

                        97251F       02065F       08102F       02042F       02041L       10301L       08202L       08301L
                       DEPTH OF    TEMPERATURE    OXYGEN      SPECIFIC     SPECIFIC        PH         OXYGEN       OXYGEN
                       SAMPLING       WATER      DISSOLVED    CONDUCT.     CONDUCT.                  BIOCHEM.     TOTAL COD
                                                                                                   DEMAND-BOD
                  SUBM  FROM SURF.                  02                                                 02           02
                   ID       M          DEG.C       MG/L        USIE/CM      US/CM       PH UNITS      MG/L         MG/L
SAMPLES(FLAGS)           12(0)         12(0)       12(0)        12(0)       12(0)        12(0)        12(1)        12(0)
           LOW             1.8           1.          7.8         290.        261.          7.9          L.3          6.1
          HIGH             4.3          20.         14.5         405.        342.          8.5          2.7          26.
       AVERAGE             2.5          14.0        10.0         345.        313.                       1.2*         12.2
      STD.DEV.              .7           6.3         2.0          38.         23.                        .7*          6.5
  PERCNT:10TH              2.            4.5         8.3         300.        287.          8.2           .4           7.
          25TH             2.0          10.0         8.6         308.        301.          8.3           .6           8.1
    MEDIAN 50TH            2.2          16.0         9.0         348.        316.          8.4          1.0           9.3
          75TH             3.0          18.7        11.4         380.        332.          8.4          1.7          15.5
          90TH             3.           19.         12.4         385.        335.          8.5          2.           23.
SECONDARY CODE

                        06536L       06005L       06154L       06107L       06905L       06715L       06721L       10151L
                       PHENOLIC      CARBON       CARBON       CARBON       CARBON      CHLORO -    CHLOROPHYLL  ALKALINITY
                       MATERIAL      TOTAL       DISSOLVED    DISSOLVED   PARTICULATE   PHYLL A        -A-         PHENOL
                        PHENOL       ORGANIC     INORGANIC    ORGANIC       TOTAL                   EPILITHON    PHTHALEIN
                  SUBM                 C             C            C            C                                  CACO3
                   ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/M3        MG/M2        MG/L
SAMPLES(FLAGS)           12(7)        10(0)                                                                      12(8)
           LOW           L.002          4.7                                                                         .0
          HIGH            .009         10.                                                                        L4.2
       AVERAGE            .003*         7.6                                                                        2.8*
      STD.DEV.            .002*         1.9                                                                        2.1*
  PERCNT:10TH            L.002          5.0                                                                         .0
          25TH           L.002          6.3                                                                         .0
    MEDIAN 50TH          L.002          7.3                                                                       L4.2
          75TH            .003          9.2                                                                       L4.2
          90TH            .003         10.0                                                                       L4.2
SECONDARY CODE

                        10101L       06301L       06201L       17203L       16306L       09107L       14102L       10602L
                      ALKALINITY    CARBONATE   BICARBONT.    CHLORIDE     SULPHATE     FLUORIDE      SILICA      HARDNESS
                        TOTAL        (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED    DISSOLVED    REACTIVE       TOTAL
                                                                                                                  (CALCD.)
                  SUBM   CACO3         CO3         HCO3          CL           SO4           F           SIO2        CACO3
                   ID    MG/L         MG/L        MG/L          MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)           12(0)        12(8)        12(8)        12(12)       12(0)        12(0)        12(0)        12(0)
           LOW            113.           0.        Q131.          L0.          20.          .12          3.2         120.
          HIGH            148.          Q5.        Q170.          L0.          40.          .15          5.5         167.
       AVERAGE            132.           3.*        154.*                      32.          .13          4.1         146.
      STD.DEV.             11.           2.*         12.*                       7.          .01           .7          13.
  PERCNT:10TH             116.           0.         138.          L0.          25.          .12          3.2         136.
          25TH            126.           0.         145.          L1.0         27.          .12          3.7         138.
    MEDIAN 50TH           131.           5.         155.          L1.0         30.          .12          4.1         144.
          75TH            140.           5.         163.          L1.0         38.          .14          4.5         156.
          90TH            145.          Q5.        Q167.          L0.          40.          .14          5.0         159.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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NAQUADAT SUMMARY REPORT APR 30, 1986
SURFACE WATER DATA

STATION 00AL05EB2122 LAT. 53D 31M 41S LONG. 113D 29M 37S PR 3 UTM 12 334700E 5933700N FOR MAY 19, 1982 TO NOV 02, 1982
NORTH SASKATCHEWAN RIVER - CENTRE 90M UPSTREAM OF ROSSDALE PLANT

SUBM ID	20110L CALCIUM DISSOLVED CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	11103L SODIUM DISSOLVED NA MG/L	19103L POTASSIUM DISSOLVED K MG/L	15406L PHOSPHOROUS TOTAL PHOSPHATE P MG/L	15419L PHOSPHORUS TOTAL PHOSPHATE P MG/L	07403L NITROGEN TOTAL ORG. (CALCD.) N MG/L	07602L NITROGEN TOTAL (CALCD.) N MG/L
SAMPLES(FLAGS)	12(0)	12(0)	12(0)	12(0)	10(0)	5(0)	12(12)	12(12)
LOW	35.	8.	2.	.5	.008	.012	Q.100	Q.550
HIGH	47.	13.	5.	1.0	.107	.041	Q.200	Q.650
AVERAGE	41.	10.6	4.1	.8	.037	.020		
STD.DEV.	4.	1.3	.9	.1	.038	.012		
PERCNT:10TH	37.	10.	3.	.7	.010		Q.100	Q.550
25TH	39.	10.0	4.0	.8	.012	.012	.100	.550
MEDIAN 50TH	41.	10.0	4.0	.8	.016	.017	.100	.550
75TH	44.	11.5	5.0	.9	.046	.017	.100	.550
90TH	47.	12.	5.	.9	.104		Q.100	Q.550
SECONDARY CODE						21L		

SUBM ID	07021L NITROGEN TOTAL KJELDAHL N MG/L	07503L NITROGEN TOTAL AMMONIA N MG/L	07562L NITROGEN DISSOLVED AMMONIA N MG/L	07205L NITROGEN DISSOLVED NITRITE N MG/L	07206L NITROGEN DISSOLVED NITRITE N MG/L	07105L NITROGEN DISSOLVED NO3 & NO2 N MG/L	07906L NITROGEN PARTICULATE TOTAL N MG/L	10407L RESIDUE NONFILTRABLE MG/L
SAMPLES(FLAGS)	12(5)	12(12)	5(0)	12(12)	12(12)	12(12)		5(0)
LOW	.100	L.4	.005	L.05	L.007	L.05		5.
HIGH	.6	L.4	.099	L.05	L.007	L.05		16.
AVERAGE	.363*		.025					10.
STD.DEV.	.193*		.041					6.
PERCNT:10TH	.110	L.4		L.05	L.007	L.05		
25TH	.145	L.40	.005	L.050	L.007	L.050		5.
MEDIAN 50TH	L.500	L.40	.007	L.050	L.007	L.050		10.
75TH	L.500	L.40	.009	L.050	L.007	L.050		16.
90TH	.5	L.4		L.05	L.007	L.05		
SECONDARY CODE	01L							

SUBM ID	10474L RESIDUE TOTAL MG/L	10453L RESIDUE FILTRABLE MG/L	00205L TOTAL DISSOLVED SOLIDS MG/L	36001L COLIFORMS TOTAL MPN NO/100ML	36011L COLIFORMS FECAL MPN NO/100ML	36102L STREP. FECAL MF NO/100ML	36910L STD. PLATE COUNT BACT.DENS. NO/ML	29009L COPPER TOTAL CU MG/L
SAMPLES(FLAGS)	5(0)	5(0)	12(0)	12(0)	12(0)	12(0)	11(0)	12(4)
LOW	250.	240.	137.	30.	2.	4.	24.	L.001
HIGH	276.	270.	183.	540.	46.	270.	720.	.011
AVERAGE	264.	254.	165.	134.	18.	64.	199.	.004*
STD.DEV.	11.	13.	14.	151.	12.	77.	226.	.003*
PERCNT:10TH			149.	36.	4.	4.	27.	L.001
25TH	256.	240.	157.	42.	10.	12.	40.	L.001
MEDIAN 50TH	265.	260.	166.	70.	16.	37.	80.	.003
75TH	275.	260.	179.	175.	22.	85.	340.	.005
90TH			183.	280.	32.	140.	480.	.008
SECONDARY CODE				02L	12L			

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0007 -  0009 PAGE  18                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                       SURFACE WATER DATA
STATION 00AL05EB2122    LAT. 53D 31M 41S  LONG. 113D 29M 37S   PR 3   UTM 12 334700E 5933700N  FOR MAY 19, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER  -   CENTRE       90M UPSTREAM OF ROSSDALE PLANT

                         30009L     26304L     13306L     25003L     28009L     42009L     27009L     33005L
                          ZINC       IRON     ALUMINUM   MANGANESE   NICKEL   MOLYBDENUM   COBALT     ARSENIC
                         TOTAL     EXTRBLE.   EXTRBLE.    TOTAL      TOTAL      TOTAL      TOTAL      TOTAL

                  SUBM    ZN         FE         AL         MN         NI         MO         CO         AS
                   ID    MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)           12(1)      12(0)      8(0)       9(2)       12(1)      8(8)       12(11)     7(1)
           LOW           L.001        .04       .151      L.008      L.001      L.001      L.001     L.0002
          HIGH            .156       1.23      3.170       .099       .073      L.001       .006      .0012
       AVERAGE            .034*       .35       .900       .027*      .011*                 .001*     .0005*
      STD.DEV.            .040*       .35      1.014       .030*      .020*                 .001*     .0004*
  PERCNT:10TH             .013        .13                             .003                 L.001
          25TH            .020        .17       .276       .009       .004      L.001      L.001      .0003
   MEDIAN 50TH            .023        .22       .546       .011       .005      L.001      L.001      .0003
          75TH            .034        .39      1.119       .037       .007      L.001      L.001      .0008
          90TH            .038        .87                             .018                 L.001
SECONDARY CODE
                         04304L     48009L     24009L     82302L     82009L     80015L     34005L     23009L
                        BERYLLIUM   CADMIUM   CHROMIUM     LEAD       LEAD     MERCURY   SELENIUM   VANADIUM
                         EXTRBLE.    TOTAL      TOTAL    EXTRBLE.     TOTAL      TOTAL     TOTAL      TOTAL

                  SUBM    BE         CD         CR         PB         PB         HG         SE         V
                   ID    MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)           8(8)       12(10)     12(2)                 12(8)                 7(7)       8(3)
           LOW           L.001      L.001      L.001                 L.003                L.0002      L.002
          HIGH           L.001       .011       .018                  .090                L.0002       .010
       AVERAGE                       .002*      .006*                 .011*                            .004*
      STD.DEV.                       .003*      .005*                 .025*                            .003*
  PERCNT:10TH                       L.001      L.001                 L.003
          25TH           L.001      L.001       .003                 L.003                L.0002      L.002
   MEDIAN 50TH           L.001      L.001       .006                 L.003                L.0002       .003
          75TH           L.001      L.001       .009                  .005                L.0002       .004
          90TH                       .002       .011                  .006
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  19                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                      SURFACE WATER DATA
STATION 00AL05EB2123    LAT. 53D 31M 39S  LONG. 113D 29M 37S   PR 3   UTM 12 334700E 5933650N  FOR MAY 19, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     90M UPSTREAM OF ROSSDALE PLANT

                          97251F        02065F        08102F        02042F        02041L        10301L        08202L        08301L
                         DEPTH OF     TEMPERATURE     OXYGEN       SPECIFIC      SPECIFIC         PH          OXYGEN        OXYGEN
                         SAMPLING        WATER       DISSOLVED     CONDUCT.      CONDUCT.                    BIOCHEM.     TOTAL COD
                                                                                                            DEMAND-BOD
                  SUBM  FROM SURF.                      02                                                      02           02
                   ID       M           DEG.C          MG/L        USIE/CM        US/CM        PH UNITS        MG/L         MG/L
SAMPLES(FLAGS)            12(0)         12(0)         12(0)         12(0)         12(0)         12(0)         12(1)        12(0)
           LOW               .6            .5           7.7          290.          268.           8.1           L.3          6.5
          HIGH              3.4           20.          14.6          405.          343.           8.5            3.          25.
       AVERAGE              1.5          14.0          10.0          349.          318.                         1.2*         13.1
      STD.DEV.               .7           6.4           2.1           39.           23.                          .8*          5.7
  PERCNT:10TH                .9           4.5           8.3          300.          288.           8.2            .4          7.4
          25TH              1.0          10.1           8.5          314.          307.           8.3            .5          9.4
   MEDIAN 50TH              1.3          16.3           9.1          355.          324.           8.4           1.0         12.0
          75TH              1.8          18.6          11.5          385.          337.           8.4           1.7         16.5
          90TH              2.1          19.5          12.4          390.          340.           8.4           2.2          20.
SECONDARY CODE
                          06536L        06005L        06154L        06107L        06905L        06715L        06721L        10151L
                         PHENOLIC       CARBON        CARBON        CARBON        CARBON       CHLORO -    CHLOROPHYLL   ALKALINITY
                         MATERIAL       TOTAL       DISSOLVED     DISSOLVED    PARTICULATE     PHYLL A          -A-          PHENOL
                          PHENOL       ORGANIC      INORGANIC      ORGANIC        TOTAL                     EPILITHON     PHTHALEIN
                  SUBM                    C             C             C             C                                      CACO3
                   ID      MG/L          MG/L          MG/L          MG/L          MG/L         MG/M3         MG/M2         MG/L
SAMPLES(FLAGS)            12(7)         11(0)          4(1)          4(0)          4(0)                                    12(9)
           LOW            L.002           5.6           L0.           1.6           .08                                       .0
          HIGH             .007          11.0          35.4            4.          2.18                                     L4.2
       AVERAGE             .003*          8.3          24.1*          2.9           .99                                      3.1*
      STD.DEV.             .001*          1.7          15.6*          1.2           .88                                      1.9*
  PERCNT:10TH             L.002            7.                                                                                 0.
          25TH            L.002            7.          15.5*          1.9           .42                                      2.1*
   MEDIAN 50TH            L.002            8.          30.0           3.1           .84                                     L4.2
          75TH             .003           10.          32.7           4.0          1.55                                     L4.2
          90TH             .005           11.                                                                               L4.2
SECONDARY CODE
                          10101L        06301L        06201L        17203L        16306L        09107L        14102L        10602L
                        ALKALINITY    CARBONATE    BICARBONT.     CHLORIDE      SULPHATE      FLUORIDE       SILICA       HARDNESS
                          TOTAL        (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED     DISSOLVED     REACTIVE        TOTAL
                                                                                                                         (CALCD.)
                  SUBM    CACO3          CO3          HCO3            CL           SO4             F           SIO2         CACO3
                   ID      MG/L          MG/L        MG/L            MG/L          MG/L          MG/L          MG/L         MG/L
SAMPLES(FLAGS)            12(0)         12(9)         12(9)        12(11)         12(0)         12(0)         12(0)        12(0)
           LOW             114.            0.         Q131.           L0.           15.           .11           3.0         118.
          HIGH             146.           Q5.         Q168.            2.           40.           .15           5.7         158.
       AVERAGE             132.           4.*         153.*          1.1*           30.           .13           4.0         143.
      STD.DEV.              11.           2.*          12.*           .3*            7.           .01            .8          12.
  PERCNT:10TH              116.            0.          139.           L0.           25.           .12           3.0         134.
          25TH             127.            3.          144.          L1.0           28.           .12           3.6         137.
   MEDIAN 50TH             132.            5.          156.          L1.0           30.           .13           3.9         141.
          75TH             141.            5.          164.          L1.0           33.           .14           4.4         157.
          90TH             146.           Q5.         Q168.           L0.           40.           .14           5.2         158.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  20                  NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                    SURFACE WATER DATA
STATION 00AL05EB2123    LAT. 53D 31M 39S  LONG. 113D 29M 37S   PR 3   UTM 12 334700E 5933650N  FOR MAY 19, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER   RIGHT BANK      90M UPSTREAM OF ROSSDALE PLANT

                       20110L      12102L       11103L      19103L       15406L       15419L       07403L       07602L
                       CALCIUM     MAGNESIUM    SODIUM      POTASSIUM    PHOSPHOROUS  PHOSPHORUS   NITROGEN     NITROGEN
                       DISSOLVED   DISSOLVED    DISSOLVED   DISSOLVED    TOTAL        TOTAL        TOTAL ORG.   TOTAL
                                                                         PHOSPHATE    PHOSPHATE    (CALCD.)     (CALCD.)
                 SUBM  CA          MG           NA          K            P            P            N            N
                  ID   MG/L        MG/L         MG/L        MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          12(0)       12(0)        12(0)       12(0)        10(0)                     12(12)       12(12)
           LOW            34.          8.           2.          .5         .011                     Q.100        Q.550
          HIGH            46.         11.           6.         1.3         .13                      Q.300        Q.750
       AVERAGE            41.         10.2          4.6         .9         .044
      STD.DEV.             4.          .9           1.4         .2         .039
   PERCNT:10TH            37.          9.           3.          .7         .013                     Q.100        Q.550
          25TH            38.         10.0          3.5         .8         .017                      .100         .550
    MEDIAN 50TH           40.         10.0          5.0         .9         .022                      .100         .550
          75TH            45.         11.0          6.0        1.0         .059                      .150         .600
          90TH            45.         11.           6.         1.1         .107                     Q.200        Q.650
SECONDARY CODE

                       07021L      07503L       07562L      07205L       07206L       07105L       07906L       10407L
                       NITROGEN    NITROGEN     NITROGEN    NITROGEN     NITROGEN     NITROGEN     NITROGEN     RESIDUE
                       TOTAL       TOTAL        DISSOLVED   DISSOLVED    DISSOLVED    DISSOLVED    PARTICULATE  NONFILTRABLE
                       KJELDAHL    AMMONIA      AMMONIA     NITRITE      NITRITE      NO3 & NO2    TOTAL
                 SUBM  N           N            N           N            N            N            N
                  ID   MG/L        MG/L         MG/L        MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          12(8)       12(12)                   12(12)       12(12)       12(12)       4(1)         5(0)
           LOW           L.5          L.4                    L.05         L.007        L.05         L.01           5.
          HIGH            .7          L.4                    L.05         L.007        L.05          .11          20.
       AVERAGE           .533*                                                                       .048*        14.
      STD.DEV.           .065*                                                                       .045*         6.
   PERCNT:10TH           L.5          L.4                    L.05         L.007        L.05
          25TH           L.500        L.40                   L.050        L.007        L.050         .015*        13.
    MEDIAN 50TH          L.500        L.40                   L.050        L.007        L.050         .035         14.
          75TH            .550        L.40                   L.050        L.007        L.050         .080         18.
          90TH            .6          L.4                    L.05         L.007        L.05
SECONDARY CODE         01L

                       10474L      10453L       00205L      36001L       36011L       36102L       36910L       29009L
                       RESIDUE     RESIDUE      TOTAL       COLIFORMS    COLIFORMS    STREP.       STD. PLATE   COPPER
                       TOTAL       FILTRABLE    DISSOLVED   TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                SOLIDS                                             BACT.DENS.
                 SUBM                                       MPN          MPN          MF                        CU
                  ID   MG/L        MG/L         MG/L        NO/100ML     NO/100ML     NO/100ML     NO/ML        MG/L
SAMPLES(FLAGS)          5(0)        5(0)         12(0)       12(0)        12(0)        12(0)        11(0)        12(3)
           LOW           215.        210.         132.         36.          10.          10.          22.        L.001
          HIGH           310.        290.         185.       2400.         170.         210.        6300.         .006
       AVERAGE           270.        256.         167.        550.          66.          77.         928.         .003*
      STD.DEV.            35.         30.          15.        636.          44.          62.        1854.         .002*
   PERCNT:10TH                                    157.        170.          22.          18.          35.        L.001
          25TH           264.        250.         159.        255.          31.          24.         120.         .001*
    MEDIAN 50TH          278.        260.         167.        315.          66.          65.         200.         .002
          75TH           283.        270.         181.        585.          85.         100.         770.         .004
          90TH                                    182.       1000.         110.         170.        1800.         .006
SECONDARY CODE                                              02L          12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  21                       NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                      SURFACE WATER DATA
STATION 00AL05EB2123    LAT. 53D 31M 39S  LONG. 113D 29M 37S   PR 3   UTM 12 334700E 5933650N  FOR MAY 19, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER   RIGHT BANK      90M UPSTREAM OF ROSSDALE PLANT

                         30009L     26304L     13306L     25003L     28009L     42009L     27009L     33005L
                          ZINC       IRON     ALUMINUM   MANGANESE   NICKEL   MOLYBDENUM   COBALT     ARSENIC
                         TOTAL     EXTRBLE.   EXTRBLE.    TOTAL      TOTAL      TOTAL      TOTAL     TOTAL

                  SUBM     ZN         FE         AL         MN         NI         MO         CO         AS
                   ID     MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)           12(0)      12(0)       8(0)       9(1)      12(1)       8(7)      12(10)      7(1)
           LOW            .014        .03       .251      L.008      L.001      L.001      L.001     L.0002
          HIGH            .045       1.24      3.700       .121       .014       .004       .006      .0013
       AVERAGE            .030        .37       .897       .031*      .006*      .001*      .002*     .0005*
      STD.DEV.            .010        .36      1.187       .037*      .004*      .001*      .002*     .0004*
   PERCNT:10TH            .017        .10                             .003                 L.001
          25TH            .021        .14       .313       .010       .003      L.001      L.001      .0003
   MEDIAN 50TH            .031        .24       .379       .015       .005      L.001      L.001      .0004
          75TH            .037        .44       .920       .039       .008      L.001      L.001      .0004
          90TH            .042        .93                             .011                  .003
SECONDARY CODE

                         04304L     48009L     24009L     82302L     82009L     80015L     34005L     23009L
                        BERYLLIUM   CADMIUM   CHROMIUM     LEAD       LEAD      MERCURY   SELENIUM   VANADIUM
                         EXTRBLE.    TOTAL      TOTAL     EXTRBLE.    TOTAL      TOTAL     TOTAL      TOTAL

                  SUBM     BE         CD         CR         PB         PB         HG         SE         V
                   ID     MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)            8(8)      12(9)      12(3)                 12(8)                  7(5)       8(3)
           LOW           L.001      L.001      L.001                 L.003                 L.0002     L.002
          HIGH           L.001       .002       .014                  .038                  .0007      .013
       AVERAGE                       .001*      .005*                 .006*                 .0003*     .004*
      STD.DEV.                       .000*      .004*                 .010*                 .0002*     .004*
   PERCNT:10TH                      L.001      L.001                 L.003
          25TH           L.001      L.001       .002*                L.003                 L.0002     L.002
   MEDIAN 50TH           L.001      L.001       .004                 L.003                 L.0002      .003
          75TH           L.001       .001*      .007                  .005                  .0003      .004
          90TH                       .002       .011                  .006
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  22                      NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                          SURFACE WATER DATA
STATION 00AL05EB2140    LAT. 53D 31M 43S  LONG. 113D 29M 26S   PR 3   UTM 12 334900E 5933750N  FOR MAY 17, 1983 TO AUG 03, 1983
MILLCREEK AT MOUTH

                         97251F       02065F       08102F       02042F       02041L       10301L       08202L       08301L
                        DEPTH OF    TEMPERATURE    OXYGEN      SPECIFIC     SPECIFIC        PH         OXYGEN       OXYGEN
                        SAMPLING       WATER      DISSOLVED    CONDUCT.     CONDUCT.                  BIOCHEM.    TOTAL COD
                                                                                                     DEMAND-BOD
                 SUBM  FROM SURF.                    O2                                                  O2           O2
                  ID       M          DEG.C         MG/L       USIE/CM        US/CM      PH UNITS       MG/L         MG/L
SAMPLES(FLAGS)                         3(0)         3(0)         3(0)         4(0)         4(0)         4(0)         4(0)
           LOW                         17.0          5.4         450.         481.          7.0          4.5         84.8
          HIGH                         20.5          9.4         925.        1559.          8.6          8.0        113.0
       AVERAGE                         19.2          6.8         632.         869.                       5.7         96.3
      STD.DEV.                          1.9          2.3         256.         493.                       1.6         12.8
   PERCNT:10TH
          25TH                                                                516.          7.3          4.7         86.3
    MEDIAN 50TH                        20.           5.6         520.         717.          7.7          5.2         93.8
          75TH                                                               1222.          8.2          6.8        106.3
          90TH
SECONDARY CODE                                                                                                       04L

                         06536L       06005L       06154L       06107L       06905L       06715L       06721L       10151L
                        PHENOLIC      CARBON       CARBON       CARBON       CARBON      CHLORO -   CHLOROPHYLL  ALKALINITY
                        MATERIAL      TOTAL      DISSOLVED    DISSOLVED   PARTICULATE    PHYLL A        -A-         PHENOL
                         PHENOL      ORGANIC     INORGANIC     ORGANIC       TOTAL                  EPILITHON    PHTHALEIN
                 SUBM                   C            C            C            C                                  CACO3
                  ID      MG/L        MG/L         MG/L         MG/L         MG/L         MG/M3        MG/M2        MG/L
SAMPLES(FLAGS)            4(0)                     4(0)         4(0)         4(0)         4(0)                      4(0)
           LOW            .015                     29.0         18.0         1.82         3.26                        .0
          HIGH            .035                     60.0         33.0         8.20        61.63                       8.3
       AVERAGE            .024                     43.0         23.8         4.64        18.47                       2.1
      STD.DEV.            .008                     13.8          6.7         3.05        28.79                       4.1
   PERCNT:10TH
          25TH            .019                     32.0         19.0         2.11         3.43                        .0
    MEDIAN 50TH           .023                     41.5         22.0         4.28         4.49                        .0
          75TH            .029                     54.0         28.5         7.18        33.50                       4.2
          90TH
SECONDARY CODE          37L

                         10101L       06301L       06201L       17203L       16306L       09107L       14102L       10602L
                       ALKALINITY   CARBONATE    BICARBONT.    CHLORIDE     SULPHATE     FLUORIDE      SILICA      HARDNESS
                         TOTAL       (CALCD.)      (CALCD.)    DISSOLVED    DISSOLVED    DISSOLVED    REACTIVE       TOTAL
                                                                                                                   (CALCD.)
                 SUBM     CACO3         CO3        HCO3           CL           SO4           F          SIO2         CACO3
                  ID      MG/L        MG/L       MG/L            MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            4(0)        4(0)         4(0)         4(0)         4(0)         4(0)         4(1)         4(0)
           LOW            112.          0.         137.         15.0          85.          .18          L.5         176.
          HIGH            242.         10.         295.          62.         550.          .59         14.1         524.
       AVERAGE            177.          2.         210.         30.5         226.          .35          7.5*        305.
      STD.DEV.             54.          5.          65.         22.2         219.          .20          5.8*        154.
   PERCNT:10TH
          25TH            138.          0.         168.         15.0          93.          .19          3.1*        200.
    MEDIAN 50TH           177.          0.         205.         22.5         135.          .31          7.7         260.
          75TH            216.          5.         253.         46.0         360.          .51         11.8         410.
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  23                        NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                          SURFACE WATER DATA
STATION 00AL05EB2140    LAT. 53D 31M 43S  LONG. 113D 29M 26S   PR 3   UTM 12 334900E 5933750N  FOR MAY 17, 1983 TO AUG 03, 1983
MILLCREEK AT MOUTH

                          20110L       12102L       11103L       19103L       15406L       15419L       07403L       07602L
                          CALCIUM     MAGNESIUM     SODIUM      POTASSIUM   PHOSPHOROUS   PHOSPHORUS    NITROGEN     NITROGEN
                         DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED     TOTAL        TOTAL      TOTAL ORG.     TOTAL
                                                                            PHOSPHATE    PHOSPHATE     (CALCD.)     (CALCD.)
                   SUBM     CA           MG           NA           K            P            P            N            N
                    ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             4(0)         4(0)         4(0)         4(0)                      4(0)                      4(3)
           LOW              49.         13.0         22.0          9.9                      .380                     Q1.510
          HIGH             116.         57.0        136.          13.0                     2.600                    Q25.550
       AVERAGE              75.         28.8         60.3         11.7                     1.074                      8.077*
      STD.DEV.              29.         19.7         53.5          1.3                     1.038                     11.667*
  PERCNT:10TH
          25TH              55.         15.5         22.5         10.9                      .423                      1.830
  MEDIAN  50TH              67.         22.5         41.5         12.0                      .658                      2.625
          75TH              95.         42.0         98.0         12.5                     1.725                     14.325
          90TH
SECONDARY CODE                                                                              21L

                          07021L       07503L       07562L       07205L       07206L       07105L       07906L       10407L
                         NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     RESIDUE
                           TOTAL        TOTAL      DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED  PARTICULATE NONFILTRABLE
                         KJELDAHL      AMMONIA      AMMONIA      NITRITE      NITRITE     NO3 & NO2     TOTAL
                   SUBM      N            N            N            N            N            N            N
                    ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             4(0)                      4(0)         4(4)                      4(3)         4(0)         4(0)
           LOW            1.460                      .034         L.05                      L.05          .10          23.
          HIGH           25.500                     8.930         L.05                       .20         1.11         276.
       AVERAGE            7.990                     2.366                                    .087*        .638         125.
      STD.DEV.           11.688                     4.379                                    .075*        .481         122.
  PERCNT:10TH
          25TH            1.780                      .067        L.050                     L.050          .235          27.
  MEDIAN  50TH            2.500                      .250        L.050                     L.050          .670         101.
          75TH           14.200                     4.665        L.050                      .125*        1.040         224.
          90TH
SECONDARY CODE

                          10474L       10453L       00205L       36001L       36011L       36102L       36910L       29009L
                          RESIDUE      RESIDUE       TOTAL     COLIFORMS    COLIFORMS      STREP.     STD. PLATE     COPPER
                           TOTAL     FILTRABLE    DISSOLVED      TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                    SOLIDS                                           BACT.DENS.
                                                                  MPN          MPN          MF                       CU
                   SUBM
                    ID     MG/L         MG/L         MG/L      NO/100ML     NO/100ML     NO/100ML       NO/ML        MG/L
SAMPLES(FLAGS)             4(0)         4(0)         4(0)         4(0)         4(0)         4(0)         4(0)         4(0)
           LOW             340.         310.         264.         800.          4.          120.         910.         .006
          HIGH            1506.        1230.        1045.       66000.       19000.       85000.       44000.         .020
       AVERAGE             758.         633.         527.       28450.       10501.       25630.       20478.         .013
      STD.DEV.             513.         417.         365.       27592.        9468.       39789.       17968.         .006
  PERCNT:10TH
          25TH             451.         350.         272.        9400.        2502.        4110.        7955.         .008
  MEDIAN  50TH             593.         495.         399.       23500.       11500.        8700.       18500.         .012
          75TH            1065.         915.         782.       47500.       18500.       47150.       33000.         .018
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  24                      NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                       SURFACE WATER DATA
STATION 00AL05EB2140    LAT. 53D 31M 43S  LONG. 113D 29M 26S   PR 3   UTM 12 334900E 5933750N  FOR MAY 17, 1983 TO AUG 03, 1983
MILLCREEK AT MOUTH

                           30009L      26304L      13306L      25003L      28009L      42009L      27009L      33005L
                            ZINC        IRON      ALUMINUM    MANGANESE    NICKEL    MOLYBDENUM    COBALT     ARSENIC
                           TOTAL      EXTRBLE.    EXTRBLE.     TOTAL       TOTAL       TOTAL       TOTAL      TOTAL

                  SUBM       ZN          FE          AL          MN          NI          MO          CO          AS
                   ID       MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              4(0)        4(0)        4(0)        4(0)        4(0)        4(3)        4(2)        4(0)
           LOW              .024         .47        .160        .107        .006       L.001       L.001       .0021
          HIGH              .049        3.60        2.09        .261        .022        .006        .003        .004
       AVERAGE              .039        1.62        .680        .167        .014        .002*       .002*       .0029
      STD.DEV.              .010        1.39        .941        .068        .007        .003*       .001*       .0009
  PERCNT:10TH
          25TH              .032         .69        .185        .118        .009       L.001       L.001       .0022
   MEDIAN 50TH              .041        1.21        .235        .150        .015       L.001        .001*      .0027
          75TH              .045        2.55       1.175        .216        .020        .003*       .003       .0036
          90TH
SECONDARY CODE

                           04304L      48009L      24009L      82302L      82009L      80015L      34005L      23009L
                         BERYLLIUM    CADMIUM     CHROMIUM      LEAD        LEAD      MERCURY     SELENIUM    VANADIUM
                          EXTRBLE.     TOTAL       TOTAL      EXTRBLE.     TOTAL       TOTAL      TOTAL        TOTAL

                  SUBM       BE          CD          CR          PB          PB          HG          SE          V
                   ID       MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              4(4)        4(1)        4(0)        4(2)                    4(3)        4(3)        4(0)
           LOW             L.001       L.001        .003       L.003                  L.0001      L.0002        .006
          HIGH             L.001        .003        .009        .006                   .0002       .0007        .009
       AVERAGE                          .002*       .005        .004*                  .0001*      .0003*       .007
      STD.DEV.                          .001*       .003        .001*                  .0001*      .0003*       .002
  PERCNT:10TH
          25TH             L.001        .001*       .003       L.003                  L.0001      L.0002        .006
   MEDIAN 50TH             L.001        .002        .004        .003*                 L.0001      L.0002        .007
          75TH             L.001        .003        .007        .005                   .0001*      .0004*       .009
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  25                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                     SURFACE WATER DATA
STATION 00AL05EB2169    LAT. 53D 32M 50S  LONG. 113D 29M 19S   PR 3   UTM 12 335100E 5935800N  FOR JUN 28, 1983 TO AUG 23, 1983
FULTON CREEK AT MOUTH

                            97251F       02065F       08102F       02042F       02041L       10301L       08202L        08301L
                           DEPTH OF    TEMPERATURE    OXYGEN      SPECIFIC     SPECIFIC        PH         OXYGEN        OXYGEN
                           SAMPLING       WATER      DISSOLVED    CONDUCT.     CONDUCT.                  BIOCHEM.     TOTAL COD
                                                                                                        DEMAND-BOD
                                                       O2                                                   O2            O2
                    SUBM  FROM SURF.     DEG.C        MG/L        USIE/CM       US/CM      PH UNITS        MG/L          MG/L
                     ID       M
SAMPLES(FLAGS)                            2(0)        2(0)         2(0)         4(0)         4(0)          4(0)          4(0)
           LOW                            17.          6.          450.         911.          7.1          37.8          74.9
          HIGH                            18.          6.          990.        1025.          7.3         128.0         208.1
       AVERAGE                            17.5         6.0         720.         966.                       87.7         169.2
      STD.DEV.                              .7          .0         382.          58.                       37.9          63.1
  PERCNT:10TH
          25TH                                                                  917.          7.2          60.9         135.0
   MEDIAN 50TH                            17.5         6.0         720.         964.          7.2          92.5         196.8
          75TH                                                                 1015.          7.3         114.5         203.3
          90TH                                                                                                           04L
SECONDARY CODE

                            06536L       06005L       06154L       06107L       06905L       06715L       06721L        10151L
                           PHENOLIC      CARBON       CARBON       CARBON       CARBON      CHLORO -    CHLOROPHYLL   ALKALINITY
                           MATERIAL      TOTAL       DISSOLVED    DISSOLVED   PARTICULATE   PHYLL A         -A-          PHENOL
                            PHENOL       ORGANIC     INORGANIC     ORGANIC       TOTAL                   EPILITHON    PHTHALEIN
                                           C            C            C             C                                    CACO3
                    SUBM    MG/L          MG/L         MG/L         MG/L         MG/L        MG/M3         MG/M2         MG/L
                     ID
SAMPLES(FLAGS)              4(0)                       4(0)         4(0)         4(0)         2(0)                       4(0)
           LOW              .049                       58.0         18.0        23.86         1.59                         .0
          HIGH              .150                       63.0         24.0        37.90         3.44                         .0
       AVERAGE              .088                       60.8         20.0        31.07         2.51                         .0
      STD.DEV.              .045                        2.1          2.8         6.50         1.31                         .0
  PERCNT:10TH
          25TH              .055                       59.5         18.0        25.68                                      .0
   MEDIAN 50TH              .077                       61.0         19.0        31.25         2.51                         .0
          75TH              .122                       62.0         22.0        36.45                                      .0
          90TH
SECONDARY CODE              37L

                            10101L       06301L       06201L       17203L       16306L       09107L       14102L        10602L
                          ALKALINITY    CARBONATE    BICARBONT.    CHLORIDE     SULPHATE     FLUORIDE      SILICA       HARDNESS
                            TOTAL       (CALCD.)      (CALCD.)    DISSOLVED    DISSOLVED    DISSOLVED     REACTIVE        TOTAL
                                                                                                                       (CALCD.)
                    SUBM    CACO3         CO3          HCO3          CL           SO4           F           SIO2         CACO3
                     ID     MG/L          MG/L         MG/L         MG/L         MG/L         MG/L          MG/L          MG/L
SAMPLES(FLAGS)              4(0)          4(0)         4(0)         4(0)         4(0)         4(0)          4(0)          4(0)
           LOW              232.           0.          283.          29.           2.          .69           9.1          233.
          HIGH              263.           0.          321.          36.         240.         1.10          11.7          330.
       AVERAGE              247.           0.          300.          33.8        144.          .90          10.5          286.
      STD.DEV.               13.           0.           16.           3.3        106.          .22           1.1           49.
  PERCNT:10TH
          25TH              238.           0.          290.          31.5         65.          .71           9.6          244.
   MEDIAN 50TH              246.           0.          299.          35.0        167.          .90          10.6          291.
          75TH              255.           0.          311.          36.0        223.         1.08          11.3          328.
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  26                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                   SURFACE WATER DATA
STATION 00AL05EB2169    LAT. 53D 32M 50S  LONG. 113D 29M 19S   PR 3   UTM 12 335100E 5935800N  FOR JUN 28, 1983 TO AUG 23, 1983
FULTON CREEK AT MOUTH

                          20110L       12102L       11103L       19103L       15406L       15419L       07403L       07602L
                          CALCIUM      MAGNESIUM    SODIUM       POTASSIUM    PHOSPHOROUS  PHOSPHORUS   NITROGEN     NITROGEN
                          DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    TOTAL        TOTAL        TOTAL ORG.   TOTAL
                                                                              PHOSPHATE    PHOSPHATE    (CALCD.)     (CALCD.)
                SUBM      CA           MG           NA           K            P            P            N            N
                ID        MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            4(0)         4(0)         4(0)         4(0)                      4(0)                      4(4)
           LOW              57.          22.          58.          9.0                     3.050                    Q19.550
          HIGH              83.          31.          66.         11.0                     5.250                    Q28.550
       AVERAGE              71.          26.8         61.5         9.7                     4.275
      STD.DEV.              13.           4.0          3.3          .9                      .911
   PERCNT:10TH
          25TH              59.          23.5         59.5         9.1                     3.700                     21.050
   MEDIAN 50TH              71.          27.0         61.0         9.3                     4.400                     24.550
          75TH              82.          30.0         63.5        10.1                     4.850                     27.550
          90TH
SECONDARY CODE                                                                             21L

                          07021L       07503L       07562L       07205L       07206L       07105L       07906L       10407L
                          NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     RESIDUE
                          TOTAL        TOTAL        DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    PARTICULATE  NONFILTRABLE
                          KJELDAHL     AMMONIA      AMMONIA      NITRITE      NITRITE      NO3 & NO2    TOTAL
                SUBM      N            N            N            N            N            N            N
                ID        MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            4(0)                      4(0)         4(4)                      4(4)         4(0)         4(0)
           LOW            19.500                    8.200        L.05                      L.05         3.09           64.
          HIGH            28.500                   20.000        L.05                      L.05         4.29          127.
       AVERAGE            24.250                   14.425                                               3.647          96.
      STD.DEV.             4.031                    5.474                                                .492          26.
   PERCNT:10TH
          25TH            21.000                    9.900        L.050                     L.050        3.345          80.
   MEDIAN 50TH            24.500                   14.750        L.050                     L.050        3.605          96.
          75TH            27.500                   18.950        L.050                     L.050        3.950         112.
          90TH
SECONDARY CODE

                          10474L       10453L       00205L       36001L       36011L       36102L       36910L       29009L
                          RESIDUE      RESIDUE      TOTAL        COLIFORMS    COLIFORMS    STREP.       STD. PLATE   COPPER
                          TOTAL        FILTRABLE    DISSOLVED    TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                    SOLIDS                                              BACT.DENS.
                SUBM                                             MPN          MPN          MF                        CU
                ID        MG/L         MG/L         MG/L         NO/100ML     NO/100ML     NO/100ML     NO/ML        MG/L
SAMPLES(FLAGS)            4(0)         4(0)         4(0)         4(1)         4(1)         4(1)         4(1)         4(0)
           LOW             664.         580.         469.        24000.       50000.       11000.        9999.         .024
          HIGH             867.         740.         591.       699999.      699999.      699999.      699999.         .073
       AVERAGE             743.         643.         537.        64000.*      75000.*      42250.*      52000.*       .036
      STD.DEV.              91.          74.          56.        41697.*      23804.*      40623.*      41045.*       .025
   PERCNT:10TH
          25TH             675.         585.         491.        28000.       55000.       14000.       18500.         .024
   MEDIAN 50TH             721.         625.         543.        66000.       75000.       29000.       49000.         .024
          75TH             812.         700.         583.        99999.       95000.       70500.       85500.         .049
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  27                  NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                  SURFACE WATER DATA
STATION 00AL05EB2169    LAT. 53D 32M 50S  LONG. 113D 29M 19S   PR 3   UTM 12 335100E 5935800N  FOR JUN 28, 1983 TO AUG 23, 1983
FULTON CREEK AT MOUTH

                          30009L      26304L      13306L      25003L      28009L      42009L      27009L      33005L
                           ZINC        IRON      ALUMINUM   MANGANESE    NICKEL    MOLYBDENUM    COBALT     ARSENIC
                          TOTAL      EXTRBLE.    EXTRBLE.     TOTAL       TOTAL       TOTAL       TOTAL      TOTAL

                  SUBM     ZN           FE          AL          MN          NI          MO          CO          AS
                   ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
                           4(0)        4(0)        4(0)        4(0)        4(0)        4(2)        4(2)        4(0)
SAMPLES(FLAGS)             .065         .69        .540        .102        .012       L.001       L.001       .0013
           LOW             .175        2.85       1.430        .134        .048        .004        .003       .0023
          HIGH             .102        1.36        .971        .118        .023        .002*       .002*      .0017
       AVERAGE             .052        1.01        .431        .014        .017        .002*       .001*      .0005
      STD.DEV.
   PERCNT:10TH             .066         .74        .606        .107        .013       L.001       L.001       .0014
          25TH             .084         .95        .956        .118        .016        .002*       .002*      .0016
MEDIAN    50TH             .138        1.98       1.335        .129        .034        .004        .003       .0021
          75TH
          90TH
SECONDARY CODE
                          04304L      48009L      24009L      82302L      82009L      80015L      34005L      23009L
                        BERYLLIUM    CADMIUM    . CHROMIUM     LEAD        LEAD      MERCURY    SELENIUM    VANADIUM
                         EXTRBLE.     TOTAL       TOTAL      EXTRBLE.     TOTAL       TOTAL      TOTAL        TOTAL

                  SUBM     BE          CD          CR          PB          PB          HG          SE          V
                   ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
                          4(4)        4(0)        4(0)        4(0)                    4(4)        4(1)        4(0)
SAMPLES(FLAGS)           L.001        .002        .015        .006                  L.0001      L.0002        .003
           LOW           L.001        .004        .055        .016                  L.0001       .003         .007
          HIGH                        .003        .028        .012                               .0010*       .005
       AVERAGE                        .001        .019        .004                               .0014*       .002
      STD.DEV.
   PERCNT:10TH           L.001        .002        .016        .009                  L.0001       .0002*       .004
          25TH           L.001        .003        .021        .012                  L.0001       .0003        .006
MEDIAN    50TH           L.001        .004        .040        .014                  L.0001       .0017        .007
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  28                         NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                          SURFACE WATER DATA
STATION 00AL05EB2171    LAT. 53D 33M 52S  LONG. 113D 25M  3S   PR 3   UTM 12 339900E 5937550N  FOR MAY 19, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER     LEFT BANK      50TH STREET FOOT BRIDGE  90M UPSTREAM

                          97251F      02065F      08102F      02042F      02041L      10301L      08202L      08301L
                         DEPTH OF  TEMPERATURE    OXYGEN     SPECIFIC    SPECIFIC       PH        OXYGEN      OXYGEN
                         SAMPLING     WATER     DISSOLVED    CONDUCT.    CONDUCT.                BIOCHEM.   TOTAL COD
                                                                                               DEMAND-BOD
                  SUBM  FROM SURF.                  O2                                              O2          O2
                   ID       M         DEG.C        MG/L      USIE/CM      US/CM     PH UNITS       MG/L        MG/L
SAMPLES(FLAGS)            18(0)       22(0)       22(0)       22(0)       24(0)       24(0)       21(6)       24(3)
           LOW               .2          .5         6.2        290.        264.         8.0         L.3        L5.0
          HIGH              4.0        24.5        14.6        410.        361.         8.5         3.1         24.
       AVERAGE              1.7        14.2         9.7        343.        319.                     1.3*       10.8*
      STD.DEV.               .9         6.5         2.1         35.         23.                      .7*        5.1*
  PERCNT:10TH                .5         4.5         7.7        300.        290.         8.1          .6        L5.0
          25TH              1.5         9.0         8.5        315.        307.         8.2        L1.0         7.7
   MEDIAN 50TH              1.7        16.3         8.8        345.        319.         8.4         1.1         9.5
          75TH              2.1        19.0        11.2        365.        337.         8.4         1.4        13.5
          90TH              2.7         20.        12.8        390.        342.         8.5         2.3         18.
SECONDARY CODE                                                                                             04L

                          06536L      06005L      06154L      06107L      06905L      06715L      06721L      10151L
                         PHENOLIC     CARBON      CARBON      CARBON      CARBON     CHLORO -  CHLOROPHYLL  ALKALINITY
                         MATERIAL     TOTAL     DISSOLVED   DISSOLVED  PARTICULATE   PHYLL A       -A-        PHENOL
                          PHENOL     ORGANIC    INORGANIC    ORGANIC      TOTAL                 EPILITHON   PHTHALEIN
                  SUBM                  C           C           C           C                               CACO3
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/M3       MG/M2        MG/L
SAMPLES(FLAGS)            24(18)      11(0)       16(0)       16(0)       16(0)       10(0)        9(0)       22(15)
           LOW             .002         4.7          3.          .8         .60         .58          .0          .0
          HIGH             .005         11.        36.0         6.7        7.47        3.75      72.643        L4.2
       AVERAGE             .002*        8.1        30.1         2.4        1.79        1.62      23.250         2.9*
      STD.DEV.             .001*        2.3         7.6         1.8        1.71        1.03      23.733         2.0*
  PERCNT:10TH             L.002         5.7        29.0          .8         .62         .63                      0.
          25TH            L.002          6.        29.8         1.1         .78         .95       3.476          .0
   MEDIAN 50TH            L.002         7.5        31.5         1.7        1.32        1.09      20.571        L4.2
          75TH            L.002         10.        33.5         3.5        2.10        2.42      24.815        L4.2
          90TH             .002         11.        35.4         5.3        3.23        3.09                    L4.2
SECONDARY CODE           37L

                          10101L      06301L      06201L      17203L      16306L      09107L      14102L      10602L
                        ALKALINITY  CARBONATE   BICARBONT.   CHLORIDE    SULPHATE    FLUORIDE     SILICA     HARDNESS
                          TOTAL      (CALCD.)     (CALCD.)   DISSOLVED   DISSOLVED   DISSOLVED   REACTIVE      TOTAL
                                                                                                            (CALCD.)
                  SUBM     CACO3        CO3        HCO3          CL        SO4           F         SIO2        CACO3
                   ID      MG/L        MG/L       MG/L         MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            24(0)       22(15)      22(15)      23(21)      24(0)       24(0)       24(0)       24(0)
           LOW             114.          0.       Q129.         L0.         15.         .10         2.4        115.
          HIGH             147.         Q5.        179.         2.0         49.         .18         5.8        168.
       AVERAGE             131.         3.*       153.*        1.0*         35.         .13         3.9        147.
      STD.DEV.               9.         2.*        13.*         .2*          8.         .02          .9         12.
  PERCNT:10TH              118.          0.       Q134.         L0.         25.         .11         2.7        136.
          25TH             125.          0.       Q142.         L0.         31.         .12         3.3        138.
   MEDIAN 50TH             131.          5.        155.         L0.         35.         .13         3.8        148.
          75TH             137.         Q5.        161.         L0.         40.         .14         4.4        156.
          90TH             147.         Q5.       Q169.        L1.0         43.         .14         5.0        165.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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NAQUADAT SUMMARY REPORT APR 30, 1986
SURFACE WATER DATA

STATION 00AL05EB2171 LAT. 53D 33M 52S LONG. 113D 25M 3S PR 3 UTM 12 339900E 5937550N FOR MAY 19, 1982 TO FEB 29, 1984
NORTH SASKATCHEWAN RIVER LEFT BANK 50TH STREET FOOT BRIDGE 90M UPSTREAM

	20110L CALCIUM DISSOLVED	12102L MAGNESIUM DISSOLVED	11103L SODIUM DISSOLVED	19103L POTASSIUM DISSOLVED	15406L PHOSPHOROUS TOTAL PHOSPHATE	15419L PHOSPHORUS TOTAL PHOSPHATE	07403L NITROGEN TOTAL ORG. (CALCD.)	07602L NITROGEN TOTAL (CALCD.)
SUBM	CA	MG	NA	K	P	P	N	N
ID	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
SAMPLES(FLAGS)	24(0)	24(0)	24(0)	24(0)	10(0)	12(0)	12(12)	24(23)
LOW	33.	8.	2.	.5	.011	.006	Q.100	Q.130
HIGH	48.	14.	8.	1.2	.125	.148	Q.200	Q.650
AVERAGE	41.	11.0	4.5	.8	.044	.033		.418*
STD.DEV.	3.	1.4	1.4	.2	.040	.040		.166*
PERCNT:10TH	37.	10.	3.	.6	.013	.008	Q.100	.180
25TH	39.	10.0	3.5	.7	.017	.010	.100	.260
MEDIAN 50TH	41.	11.0	5.0	.8	.025	.019	.100	.550
75TH	43.	12.0	5.0	.9	.072	.039	.100	.550
90TH	44.	13.	6.	1.1	.113	.062	Q.100	Q.550
SECONDARY CODE						21L		

	07021L NITROGEN TOTAL KJELDAHL	07503L NITROGEN TOTAL AMMONIA	07562L NITROGEN DISSOLVED AMMONIA	07205L NITROGEN DISSOLVED NITRITE	07206L NITROGEN DISSOLVED NITRITE	07105L NITROGEN DISSOLVED NO3 & NO2	07906L NITROGEN PARTICULATE TOTAL	10407L RESIDUE NONFILTRABLE
SUBM	N	N	N	N	N	N	N	
ID	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
SAMPLES(FLAGS)	24(10)	12(12)	12(0)	23(23)	12(12)	24(23)	16(6)	17(0)
LOW	.080	L.4	.003	L.05	L.007	L.05	L.01	3.
HIGH	.6	L.4	.070	L.050	L.007	.060	.46	137.
AVERAGE	.368*		.018			.050*	.102*	25.
STD.DEV.	.167*		.019			.002*	.136*	32.
PERCNT:10TH	.120	L.4	.004	L.05	L.007	L.05	L.01	5.
25TH	.210	L.40	.006	L.05	L.007	L.050	L.010	10.
MEDIAN 50TH	L.500	L.40	.010	L.05	L.007	L.050	.050	16.
75TH	L.500	L.40	.021	L.05	L.007	L.050	.110	21.
90TH	.5	L.4	.036	L.05	L.007	L.05	.35	49.
SECONDARY CODE	01L							

	10474L RESIDUE TOTAL	10453L RESIDUE FILTRABLE	00205L TOTAL DISSOLVED SOLIDS	36001L COLIFORMS TOTAL	36011L COLIFORMS FECAL	36102L STREP. FECAL	36910L STD. PLATE COUNT BACT.DENS.	29009L COPPER TOTAL
								CU
SUBM				MPN	MPN	MF		MG/L
ID	MG/L	MG/L	MG/L	NO/100ML	NO/100ML	NO/100ML	NO/ML	
SAMPLES(FLAGS)	17(0)	17(0)	24(0)	22(0)	22(0)	22(0)	21(0)	24(13)
LOW	201.	180.	132.	470.	56.	10.	25.	L.001
HIGH	367.	300.	205.	38000.	9500.	1500.	21000.	.011
AVERAGE	271.	246.	172.	4153.	856.	247.	1873.	.003*
STD.DEV.	36.	29.	15.	8257.	1974.	402.	4489.	.003*
PERCNT:10TH	241.	220.	157.	510.	120.	50.	200.	L.001
25TH	253.	230.	163.	650.	160.	60.	300.	L.001
MEDIAN 50TH	270.	240.	171.	1200.	340.	100.	640.	L.001
75TH	279.	260.	184.	3000.	630.	290.	1100.	.004
90TH	321.	290.	188.	11000.	890.	340.	2600.	.007
SECONDARY CODE				02L	12L			

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0007 -  0009 PAGE  30                              NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                                 SURFACE WATER DATA
STATION 00AL05EB2171    LAT. 53D 33M 52S  LONG. 113D 25M  3S   PR 3   UTM 12 339900E 5937550N  FOR MAY 19, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER     LEFT BANK      50TH STREET FOOT BRIDGE  90M UPSTREAM

                           30009L      26304L      13306L      25003L      28009L      42009L      27009L      33005L
                            ZINC        IRON      ALUMINUM    MANGANESE    NICKEL    MOLYBDENUM    COBALT     ARSENIC
                           TOTAL      EXTRBLE.    EXTRBLE.     TOTAL       TOTAL       TOTAL       TOTAL      TOTAL

                  SUBM      ZN          FE          AL          MN          NI          MO          CO          AS
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             24(0)       24(0)       20(0)       21(7)       24(5)       20(18)      24(22)      16(4)
           LOW              .002         .03        .035       L.008       L.001       L.001       L.001      L.0002
          HIGH              .058        1.58       4.000        .098        .014        .005        .005       .0020
       AVERAGE              .019         .38        .587        .022*       .005*       .001*       .001*      .0007*
      STD.DEV.              .016         .38        .961        .023*       .003*       .001*       .001*      .0006*
   PERCNT:10TH              .003         .09        .084       L.008       L.001       L.001       L.001      L.0002
          25TH              .006         .12        .158       L.008        .004       L.001       L.001       .0003
    MEDIAN 50TH             .017         .22        .220        .014        .004       L.001       L.001       .0004
          75TH              .032         .54        .459        .019        .006       L.001       L.001       .0009
          90TH              .038         .87       1.860        .042        .011        .002*      L.001       .0018
SECONDARY CODE

                           04304L      48009L      24009L      82302L      82009L      80015L      34005L      23009L
                          BERYLLIUM    CADMIUM    CHROMIUM      LEAD        LEAD       MERCURY    SELENIUM    VANADIUM
                          EXTRBLE.      TOTAL       TOTAL     EXTRBLE.      TOTAL       TOTAL     TOTAL        TOTAL

                  SUBM      BE          CD          CR          PB          PB          HG          SE          V
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             20(20)      24(20)      24(8)       9(8)        12(8)       12(12)      16(13)      20(11)
           LOW             L.001       L.001       L.001       L.003       L.003       L.0001      L.0002      L.002
          HIGH             L.001        .002        .018        .008        .050       L.0001       .0007       .013
       AVERAGE                          .001*       .005*       .004*       .007*                   .0003*      .004*
      STD.DEV.                          .000*       .005*       .002*       .013*                   .0001*      .003*
   PERCNT:10TH             L.001       L.001       L.001                   L.003       L.0001      L.0002      L.002
          25TH             L.001       L.001       L.001       L.003       L.003       L.0001      L.0002      L.002
    MEDIAN 50TH            L.001       L.001        .003       L.003       L.003       L.0001      L.0002      L.002
          75TH             L.001       L.001        .006       L.003        .004       L.0001      L.0002       .005
          90TH             L.001        .002        .011                    .004       L.0001       .0004       .007
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  31                     NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                     SURFACE WATER DATA
STATION 00AL05EB2172    LAT. 53D 33M 50S  LONG. 113D 25M  3S   PR 3   UTM 12 339900E 5937500N  FOR MAY 19, 1982 TO NOV 15, 1983
 NORTH SASKATCHEWAN RIVER   -    CENTRE      50TH STREET FOOT BRIDGE  90M UPSTREAM

                     97251F       02065F       08102F       02042F       02041L       10301L       08202L       08301L
                    DEPTH OF   TEMPERATURE     OXYGEN      SPECIFIC     SPECIFIC        PH         OXYGEN       OXYGEN
                    SAMPLING      WATER       DISSOLVED    CONDUCT.     CONDUCT.                   BIOCHEM.    TOTAL COD
                                                                                                 DEMAND-BOD
               SUBM FROM SURF.                   O2                                                  O2           O2
                ID      M         DEG.C         MG/L       USIE/CM       US/CM       PH UNITS       MG/L         MG/L
SAMPLES(FLAGS)        16(0)       21(0)         22(0)       21(0)        22(0)        22(0)         19(7)        22(3)
           LOW          1.2          .5           6.2        280.         262.          8.0           L.3         L5.0
          HIGH          3.4        24.0          14.5        410.         361.          8.5           3.2          26.
       AVERAGE          2.2        14.4           9.7        345.         318.                        1.2*        11.5*
      STD.DEV.           .6         6.0           2.1         36.          24.                         .7*         5.8*
  PERCNT:10TH           1.4         7.0           7.4        300.         289.          8.2           L.3         L5.0
          25TH          1.8         10.           8.4        325.         304.          8.3            .9          6.1
   MEDIAN 50TH          2.1        16.5           8.9        350.         319.          8.4          L1.0         10.1
          75TH          2.5        18.0          10.9        365.         334.          8.4           1.7          15.
          90TH          3.1        19.8          12.6        385.         343.          8.4           2.2         19.0
SECONDARY CODE                                                                                                 04L

                     06536L       06005L       06154L       06107L       06905L       06715L       06721L       10151L
                    PHENOLIC      CARBON       CARBON       CARBON       CARBON      CHLORO -   CHLOROPHYLL  ALKALINITY
                    MATERIAL      TOTAL       DISSOLVED    DISSOLVED   PARTICULATE   PHYLL A        -A-         PHENOL
                     PHENOL      ORGANIC      INORGANIC     ORGANIC      TOTAL                   EPILITHON    PHTHALEIN
               SUBM                 C             C            C            C                                  CACO3
                ID    MG/L         MG/L          MG/L         MG/L         MG/L         MG/M3        MG/M2         MG/L
SAMPLES(FLAGS)       22(14)       10(0)         14(0)        14(0)        14(0)        10(0)                      22(14)
           LOW       L.002          3.9            2.           .8          .18          .49                        .0
          HIGH        .005         10.2          36.0          6.5         6.62         3.41                      L4.2
       AVERAGE        .002*         7.2          29.7          2.6         1.44         1.72                       2.7*
      STD.DEV.        .001*         2.0           8.3          1.7         1.60         1.04                       2.1*
  PERCNT:10TH        L.002          4.2          29.0           .9          .49          .56                       0.
          25TH       L.002           6.          29.6          1.2          .66          .95                        .0
   MEDIAN 50TH       L.002          7.5          31.5          2.1          .92         1.28                      L4.2
          75TH        .003           8.          33.0          3.8         1.94         2.68                      L4.2
          90TH        .004         10.1          34.9          4.9         2.01         3.13                      L4.2
SECONDARY CODE       37L

                     10101L       06301L       06201L       17203L       16306L       09107L       14102L       10602L
                   ALKALINITY   CARBONATE    BICARBONT.    CHLORIDE     SULPHATE     FLUORIDE      SILICA      HARDNESS
                     TOTAL       (CALCD.)      (CALCD.)    DISSOLVED    DISSOLVED    DISSOLVED    REACTIVE       TOTAL
                                                                                                              (CALCD.)
               SUBM   CACO3         CO3          HCO3          CL          SO4           F           SIO2         CACO3
                ID    MG/L         MG/L        MG/L           MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)        22(0)       22(14)        22(14)       22(21)       22(0)        22(0)        22(0)        22(0)
           LOW         114.          0.         Q129.          L0.          25.          .10          2.4         115.
          HIGH         149.         Q5.          182.           2.          50.          .17          6.0         173.
       AVERAGE         131.          3.*         153.*         1.0*         35.          .13          3.9         145.
      STD.DEV.          10.          2.*          14.*          .2*          7.          .02           .9          13.
  PERCNT:10TH          119.          0.         Q135.          L0.          25.          .11          2.7         134.
          25TH         124.          0.         Q142.          L0.          30.          .12          3.2         136.
   MEDIAN 50TH         130.          5.          155.         L1.0          35.          .13          3.8         144.
          75TH         136.         Q5.          158.          L0.          40.          .14          4.5         155.
          90TH         146.         Q5.         Q169.          L0.          45.          .15          5.0         159.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  32                      NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                        SURFACE WATER DATA
STATION 00AL05EB2172     LAT. 53D 33M 50S  LONG. 113D 25M  3S   PR 3   UTM 12 339900E 5937500N  FOR MAY 19, 1982 TO NOV 15, 1983
 NORTH SASKATCHEWAN RIVER   -   CENTRE     50TH STREET FOOT BRIDGE  90M UPSTREAM

                          20110L       12102L       11103L       19103L       15406L       15419L       07403L       07602L
                          CALCIUM      MAGNESIUM    SODIUM       POTASSIUM    PHOSPHOROUS  PHOSPHORUS   NITROGEN     NITROGEN
                          DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    TOTAL        TOTAL        TOTAL ORG.   TOTAL
                                                                              PHOSPHATE    PHOSPHATE    (CALCD.)     (CALCD.)
                  SUBM      CA           MG           NA           K            P            P            N            N
                   ID       MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)              22(0)        22(0)        22(0)        22(0)        10(0)        10(0)        12(12)       22(22)
           LOW                 33.           8.           2.           .5          .01         .008        Q.100        Q.170
          HIGH                 49.          14.           8.          1.4          .13         .154        Q.100        Q.550
       AVERAGE                 40.         10.8          4.8           .9         .043         .041
      STD.DEV.                  4.          1.3          1.7           .2         .043         .045
   PERCNT:10TH                 36.          10.           3.           .6         .012         .010        Q.100        Q.210
          25TH                 38.          10.           4.           .7         .014         .012         .100        Q.290
   MEDIAN 50TH                 40.         11.0          4.5           .8         .022         .024         .100         .550
          75TH                 42.          11.           6.           .9         .055         .048         .100        Q.550
          90TH                 45.          12.           7.          1.2         .119         .114        Q.100        Q.550
SECONDARY CODE                                                                                 21L

                          07021L       07503L       07562L       07205L       07206L       07105L       07906L       10407L
                          NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     RESIDUE
                          TOTAL        TOTAL        DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    PARTICULATE  NONFILTRABLE
                          KJELDAHL     AMMONIA      AMMONIA      NITRITE      NITRITE      NO3 & NO2    TOTAL
                  SUBM      N            N            N            N            N            N            N
                   ID       MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)              22(10)       12(12)       10(0)        22(22)       12(12)       22(22)       14(5)        14(0)
           LOW                .120          L.4         .005        L.05        L.007         L.05         L.01          6.
          HIGH                .500          L.4         .028        L.05        L.007         L.05          .48         87.
       AVERAGE                .387*                     .013                                               .106*        26.
      STD.DEV.                .150*                     .007                                               .142*        24.
   PERCNT:10TH                .160          L.4         .006        L.05        L.007         L.05         L.01          6.
          25TH                .240         L.40         .007        L.05        L.007         L.05         L.01          8.
   MEDIAN 50TH               L.500         L.40         .012       L.050        L.007        L.050         .055         18.
          75TH                 L.5         L.40         .017        L.05        L.007         L.05          .10         28.
          90TH                  .5          L.4         .024        L.05        L.007         L.05          .34         62.
SECONDARY CODE              01L

                          10474L       10453L       00205L       36001L       36011L       36102L       36910L       29009L
                          RESIDUE      RESIDUE      TOTAL        COLIFORMS    COLIFORMS    STREP.       STD. PLATE   COPPER
                          TOTAL        FILTRABLE    DISSOLVED    TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                    SOLIDS                                              BACT.DENS.
                  SUBM                                           MPN          MPN          MF                        CU
                   ID       MG/L         MG/L         MG/L       NO/100ML     NO/100ML     NO/100ML     NO/ML        MG/L
SAMPLES(FLAGS)              14(0)        14(0)        22(0)        22(0)        22(0)        22(0)        21(0)        22(9)
           LOW                208.         190.         139.         180.          30.           8.          78.        L.001
          HIGH                347.         300.         208.       14000.        1000.         840.        5700.         .006
       AVERAGE                272.         246.         171.        2334.         272.         143.         915.         .002*
      STD.DEV.                 37.          31.          15.        3469.         258.         182.        1235.         .002*
   PERCNT:10TH                228.         200.         157.         300.          50.          20.         150.        L.001
          25TH                252.         230.         161.         530.          68.          50.         350.        L.001
   MEDIAN 50TH                267.         255.         170.         880.         185.         105.         520.         .002
          75TH                286.         260.         180.        1800.         410.         130.        1000.         .003
          90TH                319.         280.         189.        7000.         700.         270.        1700.         .005
SECONDARY CODE                                                   02L          12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  33                      NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                       SURFACE WATER DATA
STATION 00AL05EB2172    LAT. 53D 33M 50S  LONG. 113D 25M  3S   PR 3   UTM 12 339900E 5937500N  FOR MAY 19, 1982 TO NOV 15, 1983
 NORTH SASKATCHEWAN RIVER    -   CENTRE     50TH STREET FOOT BRIDGE  90M UPSTREAM

                            30009L      26304L      13306L      25003L      28009L      42009L      27009L      33005L
                             ZINC        IRON      ALUMINUM   MANGANESE     NICKEL    MOLYBDENUM    COBALT     ARSENIC
                            TOTAL      EXTRBLE.    EXTRBLE.     TOTAL       TOTAL       TOTAL       TOTAL       TOTAL

                    SUBM     ZN          FE          AL          MN          NI          MO          CO          AS
                     ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              22(3)       22(0)       18(1)       19(6)       22(3)       18(16)      22(20)      14(0)
           LOW              L.001        .04        L.020       L.008       L.001       L.001       L.001       .0003
          HIGH               .048       1.99        3.090        .106        .014        .007        .005       .0017
       AVERAGE               .021*       .44         .612*       .026*       .005*       .001*       .001*      .0007
      STD.DEV.               .017*       .48         .938*       .026*       .003*       .002*       .001*      .0004
  PERCNT:10TH               L.001        .10         .075       L.008       L.001       L.001       L.001       .0003
          25TH               .003        .13         .145       L.008        .004       L.001       L.001       .0004
    MEDIAN 50TH              .018        .24         .195        .016        .004       L.001       L.001       .0005
          75TH               .037        .66         .508        .040        .006       L.001       L.001       .0010
          90TH               .045       1.00        2.790        .077        .009        .004       L.001       .0012
SECONDARY CODE
                            04304L      48009L      24009L      82302L      82009L      80015L      34005L      23009L
                          BERYLLIUM    CADMIUM     CHROMIUM      LEAD        LEAD       MERCURY    SELENIUM    VANADIUM
                           EXTRBLE.     TOTAL       TOTAL      EXTRBLE.     TOTAL       TOTAL      TOTAL        TOTAL

                    SUBM     BE          CD          CR          PB          PB          HG          SE          V
                     ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              18(18)      22(18)      22(5)       7(4)        12(10)      10(10)      14(12)      18(9)
           LOW              L.001       L.001       L.001       L.003       L.003       L.0001      L.0002      L.002
          HIGH              L.001        .002        .016        .005        .054       L.0001       .0007       .011
       AVERAGE                           .001*       .005*       .004*       .007*                   .0002*      .004*
      STD.DEV.                           .000*       .004*       .001*       .015*                   .0001*      .003*
  PERCNT:10TH               L.001       L.001       L.001                   L.003       L.0001      L.0002      L.002
          25TH              L.001       L.001        .003       L.003       L.003       L.0001      L.0002      L.002
    MEDIAN 50TH             L.001       L.001        .004       L.003       L.003       L.0001      L.0002       .002*
          75TH              L.001       L.001        .005        .004       L.003       L.0001      L.0002       .004
          90TH              L.001        .002        .007                    .004       L.0001       .0004       .010
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  34                       NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                          SURFACE WATER DATA
STATION 00AL05EB2173    LAT. 53D 33M 47S  LONG. 113D 25M  3S   PR 3   UTM 12 339900E 5937400N  FOR MAY 19, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     50TH STREET FOOT BRIDGE  90M UPSTREAM

                         97251F       02065F        08102F      02042F      02041L      10301L      08202L      08301L
                        DEPTH OF    TEMPERATURE     OXYGEN     SPECIFIC    SPECIFIC       PH        OXYGEN      OXYGEN
                        SAMPLING       WATER       DISSOLVED    CONDUCT.    CONDUCT.                BIOCHEM.   TOTAL COD
                                                                                                  DEMAND-BOD
                 SUBM  FROM SURF.                     O2                                              O2          O2
                  ID       M           DEG.C         MG/L       USIE/CM      US/CM     PH UNITS      MG/L        MG/L
SAMPLES(FLAGS)           18(0)        23(0)         23(0)       22(0)       24(0)       24(0)       22(7)       24(3)
           LOW              .2           .5           6.3        290.        266.         7.9         L.3        L5.0
          HIGH             3.0         25.0          14.5        415.        365.         8.5         2.8       141.6
       AVERAGE             1.3         13.3           9.8        349.        321.                     1.2*       18.6*
      STD.DEV.              .7          7.0           2.1         35.         24.                      .6*       27.5*
   PERCNT:10TH              .5          1.5           7.5        300.        289.         8.0          .5        L5.0
          25TH              .9          7.5           8.4        325.        310.         8.1          .9         7.3
    MEDIAN 50TH            1.0          16.           8.9        355.        322.         8.3         1.0*       10.5
          75TH             1.8         18.5          11.0        368.        338.         8.4         1.6        21.0
          90TH             2.4         19.0          12.9        390.        343.         8.4         1.8        27.
SECONDARY CODE                                                                                                  04L

                        06536L       06005L        06154L      06107L      06905L      06715L      06721L      10151L
                       PHENOLIC      CARBON        CARBON      CARBON      CARBON     CHLORO -   CHLOROPHYLL  ALKALINITY
                       MATERIAL      TOTAL       DISSOLVED   DISSOLVED  PARTICULATE   PHYLL A        -A-        PHENOL
                        PHENOL      ORGANIC      INORGANIC    ORGANIC      TOTAL                  EPILITHON   PHTHALEIN
                 SUBM                  C             C           C           C                                 CACO3
                  ID     MG/L         MG/L          MG/L        MG/L        MG/L        MG/M3       MG/M2        MG/L
SAMPLES(FLAGS)          24(16)        11(0)         16(0)       16(0)       16(0)       10(0)        9(0)       22(11)
           LOW           L.002           5.            5.          .5         .07         .49       2.960          .0
          HIGH            .005          11.          36.0         8.3        7.05        7.73      92.005        L4.2
       AVERAGE            .002*         7.9          30.7         2.6        1.50        2.30      24.990         2.1*
      STD.DEV.            .001*         1.9           7.2         2.2        1.82        2.11      34.178         2.1*
   PERCNT:10TH           L.002           6.          29.0          .6         .31         .69                     .0
          25TH           L.002          6.3          30.0          .9         .55         .95       4.587          0.
    MEDIAN 50TH          L.002          7.7          32.0         1.8         .75        1.68       8.500         2.1*
          75TH            .002          9.0          34.5         4.0        1.61        2.66      19.909        L4.2
          90TH            .004          11.          35.4         5.5        4.05        5.42                    L4.2
SECONDARY CODE          37L

                        10101L       06301L        06201L      17203L      16306L      09107L      14102L      10602L
                      ALKALINITY    CARBONATE    BICARBONT.   CHLORIDE    SULPHATE    FLUORIDE     SILICA     HARDNESS
                         TOTAL      (CALCD.)      (CALCD.)   DISSOLVED   DISSOLVED   DISSOLVED    REACTIVE      TOTAL
                                                                                                             (CALCD.)
                 SUBM    CACO3         CO3         HCO3          CL         SO4          F          SIO2        CACO3
                  ID     MG/L         MG/L        MG/L         MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           24(0)        22(11)        22(11)      24(18)      24(1)       24(0)       24(0)       24(0)
           LOW              4.           0.            5.         L0.         L5.         .10         2.3        115.
          HIGH            148.          Q5.          178.         3.0         50.         .18         7.9        182.
       AVERAGE            126.          3.*          148.*        1.2*        35.*        .13         4.0        147.
      STD.DEV.             28.          3.*           35.*         .5*         9.*        .02         1.3         14.
   PERCNT:10TH            116.           0.         Q134.         L0.         28.         .11         2.7        132.
          25TH            124.           0.         Q141.        L1.0         30.         .12         3.2        137.
    MEDIAN 50TH           130.           3.          155.        L1.0         35.         .13         3.8        144.
          75TH            137.          Q5.          163.         1.0*        40.         .14         4.5        159.
          90TH            146.          Q5.         Q170.          2.         45.         .15         5.6        163.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  35                       NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                         SURFACE WATER DATA
STATION 00AL05EB2173    LAT. 53D 33M 47S  LONG. 113D 25M  3S   PR 3   UTM 12 339900E 5937400N  FOR MAY 19, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     50TH STREET FOOT BRIDGE  90M UPSTREAM

                       20110L       12102L       11103L       19103L        15406L       15419L        07403L        07602L
                       CALCIUM      MAGNESIUM    SODIUM       POTASSIUM   PHOSPHOROUS   PHOSPHORUS     NITROGEN      NITROGEN
                      DISSOLVED     DISSOLVED    DISSOLVED    DISSOLVED     TOTAL         TOTAL       TOTAL ORG.      TOTAL
                                                                          PHOSPHATE    PHOSPHATE      (CALCD.)      (CALCD.)
              SUBM      CA           MG           NA           K             P            P             N             N
               ID      MG/L         MG/L         MG/L         MG/L          MG/L         MG/L          MG/L          MG/L
SAMPLES(FLAGS)         24(0)        24(0)        24(0)        24(0)         10(0)        12(0)         12(12)        24(22)
           LOW           33.           8.           2.           .5          .017         .010         Q.100         Q.150
          HIGH           50.          14.           9.          1.9          .13          .180         Q.200          .780
       AVERAGE           41.          10.9          4.8          .9          .049         .050                        .446*
      STD.DEV.            4.           1.5          1.6          .4          .038         .060                        .187*
  PERCNT:10TH            37.           9.           3.           .5          .019         .010         Q.100          .190
          25TH           38.          10.0          4.0          .7          .022         .014          .100          .240
    MEDIAN 50TH          41.          11.0          5.0          .9          .032         .024          .100          .550
          75TH           44.          12.0          5.5         1.0          .059         .051          .100          .550
          90TH           46.          13.0          7.          1.3          .114         .172         Q.100         Q.650
SECONDARY CODE                                                                        21L
                       07021L       07503L       07562L       07205L        07206L       07105L        07906L        10407L
                      NITROGEN     NITROGEN     NITROGEN     NITROGEN      NITROGEN     NITROGEN      NITROGEN      RESIDUE
                       TOTAL        TOTAL       DISSOLVED    DISSOLVED     DISSOLVED    DISSOLVED    PARTICULATE   NONFILTRABLE
                      KJELDAHL     AMMONIA      AMMONIA      NITRITE       NITRITE      NO3 & NO2       TOTAL
              SUBM      N            N            N            N             N            N             N
               ID      MG/L         MG/L         MG/L         MG/L          MG/L         MG/L          MG/L          MG/L
SAMPLES(FLAGS)         24(11)       12(12)       12(1)        24(23)        12(12)       24(22)        16(4)         17(0)
           LOW          .100         L.4         L.002        L.05          L.007        L.05          L.01             4.
          HIGH          .660         L.4          .110         .05          L.007         .12          3.60           202.
       AVERAGE          .393*                     .030*        .050*                      .053*         .296*           30.
      STD.DEV.          .182*                     .035*        .000*                      .014*         .887*           48.
  PERCNT:10TH           .140         L.4          .004        L.05          L.007        L.05          L.01              5.
          25TH          .190         L.40         .006        L.050         L.007        L.050          .010*            9.
    MEDIAN 50TH        L.500         L.40         .010        L.050         L.007        L.050          .050            17.
          75TH         L.500         L.40         .059        L.050         L.007        L.050          .095            24.
          90TH           .6          L.4          .068        L.050         L.007        L.050          .34             72.
SECONDARY CODE         01L
                       10474L       10453L       00205L       36001L        36011L       36102L        36910L        29009L
                       RESIDUE      RESIDUE      TOTAL       COLIFORMS     COLIFORMS     STREP.      STD. PLATE      COPPER
                        TOTAL      FILTRABLE    DISSOLVED      TOTAL         FECAL        FECAL         COUNT         TOTAL
                                                 SOLIDS                                              BACT.DENS.
                                                                MPN           MPN          MF                          CU
              SUBM
               ID      MG/L         MG/L         MG/L        NO/100ML      NO/100ML     NO/100ML       NO/ML          MG/L
SAMPLES(FLAGS)         17(0)        17(0)        24(0)        22(0)         22(0)        22(0)         21(0)         24(7)
           LOW          197.         180.         120.          100.           18.           4.          230.         L.001
          HIGH          462.         330.         213.        99000.        27000.        3300.       570000.         3.000
       AVERAGE          283.         253.         173.        15080.         3462.         714.        31464.          .128*
      STD.DEV.           63.          39.          18.        21486.         5915.         896.       123597.          .612*
  PERCNT:10TH           229.         190.         159.          550.          100.          16.          300.         L.001
          25TH          245.         240.         161.         2500.          470.         180.          620.         L.001
    MEDIAN 50TH         257.         240.         171.         8100.         1500.         355.         1100.          .002
          75TH          316.         280.         185.        21000.         3500.         870.         4300.          .006
          90TH          352.         300.         188.        32000.         8000.        1900.        14000.          .008
SECONDARY CODE                                             02L           12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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                                        NAQUADAT SUMMARY REPORT  APR 30, 1986
                                              SURFACE WATER DATA
STATION 00AL05EB2173    LAT. 53D 33M 47S  LONG. 113D 25M  3S   PR 3   UTM 12 339900E 5937400N  FOR MAY 19, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     50TH STREET FOOT BRIDGE  90M UPSTREAM

                         30009L       26304L       13306L       25003L       28009L       42009L       27009L       33005L
                          ZINC         IRON       ALUMINUM    MANGANESE      NICKEL     MOLYBDENUM     COBALT      ARSENIC
                         TOTAL       EXTRBLE.     EXTRBLE.      TOTAL        TOTAL        TOTAL        TOTAL       TOTAL

                  SUBM     ZN           FE           AL           MN           NI           MO           CO           AS
                   ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)           24(1)        24(1)        20(1)        21(5)        24(3)        20(19)       24(20)       17(2)
           LOW           L.001         L.02        L.020        L.008        L.001        L.001        L.001       L.0002
          HIGH            .069         2.16        3.010         .121         .016         .004         .005        .0019
       AVERAGE            .022*         .42*        .525*        .026*        .005*        .001*        .001*       .0007*
      STD.DEV.            .019*         .53*        .849*        .031*        .003*        .001*        .001*       .0005*
   PERCNT:10TH            .004          .09         .048        L.008        L.001        L.001        L.001       L.0002
          25TH            .005          .11         .104         .009         .003        L.001        L.001        .0003
   MEDIAN 50TH            .018          .21         .196         .012         .004        L.001        L.001        .0004
          75TH            .034          .51         .384         .020         .006        L.001        L.001        .0008
          90TH            .051         1.36        2.130         .081         .009        L.001         .003        .0018
SECONDARY CODE

                         04304L       48009L       24009L       82302L       82009L       80015L       34005L       23009L
                        BERYLLIUM     CADMIUM     CHROMIUM       LEAD         LEAD       MERCURY     SELENIUM     VANADIUM
                         EXTRBLE.     TOTAL        TOTAL       EXTRBLE.      TOTAL        TOTAL      TOTAL         TOTAL

                  SUBM     BE           CD           CR           PB           PB           HG           SE           V
                   ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)           20(19)       24(17)       24(4)        10(5)        12(8)        12(11)       17(15)       20(9)
           LOW           L.001        L.001        L.001        L.003        L.003       L.0001       L.0002        L.002
          HIGH            .001         .004         .016         .007         .078        .0001        .0004         .011
       AVERAGE            .001*        .001*        .005*        .004*        .010*       .0001*       .0002*        .004*
      STD.DEV.            .000*        .001*        .004*        .002*        .021*       .0000*       .0000*        .003*
   PERCNT:10TH           L.001        L.001        L.001        L.003        L.003       L.0001       L.0002        L.002
          25TH           L.001        L.001         .003        L.003        L.003       L.0001       L.0002        L.002
   MEDIAN 50TH           L.001        L.001         .004         .003*       L.003       L.0001       L.0002         .003
          75TH           L.001         .002         .005         .006         .005       L.0001       L.0002         .004
          90TH           L.001         .002         .013         .007         .010       L.0001        .0002         .009
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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NAQUADAT SUMMARY REPORT APR 30, 1986
SURFACE WATER DATA

STATION 00AL05EB2179 LAT. 53D 33M 13S LONG. 113D 23M 54S PR 3 UTM 12 341150E 5936300N FOR MAY 18, 1983 TO OCT 12, 1983
GOLD BAR CREEK NEAR CONFLUENCE WITH NORTH SASKATCHEWAN RIVER

SUBM ID	97251F DEPTH OF SAMPLING FROM SURF. M	02065F TEMPERATURE WATER DEG.C	08102F OXYGEN DISSOLVED O2 MG/L	02042F SPECIFIC CONDUCT. USIE/CM	02041L SPECIFIC CONDUCT. US/CM	10301L PH PH UNITS	08202L OXYGEN BIOCHEM. DEMAND-BOD O2 MG/L	08301L OXYGEN TOTAL COD O2 MG/L
SAMPLES(FLAGS)	4(0)	7(0)	7(0)	7(0)	7(0)	7(0)	7(0)	7(0)
LOW	.1	9.5	6.0	700.	674.	7.6	1.8	28.1
HIGH	.5	23.0	14.2	1200.	1298.	8.4	57.6	175.6
AVERAGE	.3	15.3	8.8	1061.	1083.		11.3	69.1
STD.DEV.	.2	5.0	2.8	173.	216.		20.5	56.4
PERCNT:10TH								
25TH	.2	10.0	6.1	1000.	980.	7.7	2.1	32.1
MEDIAN 50TH	.3	15.5	8.6	1100.	1139.	8.1	3.6	34.9
75TH	.4	20.	10.0	1200.	1277.	8.3	6.0	115.5
90TH								
SECONDARY CODE								04L

SUBM ID	06536L PHENOLIC MATERIAL PHENOL MG/L	06005L CARBON TOTAL ORGANIC C MG/L	06154L CARBON DISSOLVED INORGANIC C MG/L	06107L CARBON DISSOLVED ORGANIC C MG/L	06905L CARBON PARTICULATE TOTAL C MG/L	06715L CHLORO - PHYLL A MG/M3	06721L CHLOROPHYLL -A- EPILITHON MG/M2	10151L ALKALINITY PHENOL PHTHALEIN CACO3 MG/L
SAMPLES(FLAGS)	7(1)		7(0)	7(0)	7(0)	7(0)		7(1)
LOW	L.002		33.0	8.1	.55	2.32		.0
HIGH	.027		75.0	43.0	11.60	36.70		L4.2
AVERAGE	.013*		57.6	15.3	5.03	12.08		.6*
STD.DEV.	.007*		13.6	12.4	4.37	13.23		1.6*
PERCNT:10TH								
25TH	.011		51.0	8.1	1.03	2.49		.0
MEDIAN 50TH	.012		59.0	11.0	5.15	5.98		.0
75TH	.015		66.0	15.0	9.85	23.62		.0
90TH								
SECONDARY CODE	37L							

SUBM ID	10101L ALKALINITY TOTAL CACO3 MG/L	06301L CARBONATE (CALCD.) CO3 MG/L	06201L BICARBONT. (CALCD.) HCO3 MG/L	17203L CHLORIDE DISSOLVED CL MG/L	16306L SULPHATE DISSOLVED SO4 MG/L	09107L FLUORIDE DISSOLVED F MG/L	14102L SILICA REACTIVE SIO2 MG/L	10602L HARDNESS TOTAL (CALCD.) CACO3 MG/L
SAMPLES(FLAGS)	7(0)	7(1)	7(1)	7(0)	7(0)	7(0)	7(0)	7(0)
LOW	134.	0.	163.	32.	145.	.28	5.5	244.
HIGH	296.	Q5.	361.	55.	355.	.74	9.2	498.
AVERAGE	247.	1.*	299.*	46.9	269.	.50	7.9	417.
STD.DEV.	54.	2.*	65.*	8.1	70.	.14	1.5	85.
PERCNT:10TH								
25TH	244.	0.	297.	42.	215.	.39	6.1	385.
MEDIAN 50TH	253.	0.	Q308.	47.	284.	.51	8.7	434.
75TH	289.	0.	352.	54.	310.	.56	8.9	478.
90TH								
SECONDARY CODE								

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0004 -  0006 PAGE  38                NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                  SURFACE WATER DATA
STATION 00AL05EB2179    LAT. 53D 33M 13S  LONG. 113D 23M 54S   PR 3   UTM 12 341150E 5936300N  FOR MAY 18, 1983 TO OCT 12, 1983
GOLD BAR CREEK NEAR CONFLUENCE           WITH NORTH SASKATCHEWAN RIVER

                       20110L        12102L        11103L        19103L        15406L        15419L        07403L        07602L
                       CALCIUM      MAGNESIUM      SODIUM       POTASSIUM    PHOSPHOROUS   PHOSPHORUS     NITROGEN      NITROGEN
                      DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED       TOTAL         TOTAL      TOTAL ORG.       TOTAL
                                                                            PHOSPHATE     PHOSPHATE     (CALCD.)      (CALCD.)
                 SUBM    CA            MG            NA            K             P             P             N             N
                  ID    MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
  SAMPLES(FLAGS)          7(0)          7(0)          7(0)          7(0)                        7(0)                        7(1)
             LOW           68.           18.           37.           7.6                        .048                       1.060
            HIGH          130.           42.           96.          11.5                        .500                       2.900
         AVERAGE          109.          35.3          74.0           9.2                        .217                       1.987*
        STD.DEV.           21.           8.3          20.5           1.4                        .193                        .742*
     PERCNT:10TH
            25TH           98.           34.           58.           8.2                        .062                       1.400
     MEDIAN 50TH          115.           38.           83.           8.4                        .090                      Q1.780
            75TH          122.           42.           89.          10.5                        .400                       2.820
            90TH
SECONDARY CODE                                                                               21L

                       07021L        07503L        07562L        07205L        07206L        07105L        07906L        10407L
                      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      RESIDUE
                        TOTAL         TOTAL       DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED    PARTICULATE   NONFILTRABLE
                      KJELDAHL       AMMONIA       AMMONIA       NITRITE       NITRITE      NO3 & NO2       TOTAL
                 SUBM    N             N             N             N             N             N             N
                  ID    MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
  SAMPLES(FLAGS)          7(0)                        7(0)          7(1)                        7(1)          7(0)          6(0)
             LOW          .660                        .026          L.05                        L.05           .03           14.
            HIGH         2.500                       1.900           .18                         .72          3.40          368.
         AVERAGE         1.639                        .522          .110*                       .349*         .809          141.
        STD.DEV.          .710                        .648          .048*                       .212*        1.192          164.
     PERCNT:10TH
            25TH         1.000                        .130           .07                         .17           .08           16.
     MEDIAN 50TH         1.730                        .240           .10                         .40           .32           59.
            75TH         2.320                        .700           .17                         .40          1.00          333.
            90TH
SECONDARY CODE

                       10474L        10453L        00205L        36001L        36011L        36102L        36910L        29009L
                       RESIDUE       RESIDUE        TOTAL       COLIFORMS     COLIFORMS      STREP.      STD. PLATE      COPPER
                        TOTAL       FILTRABLE     DISSOLVED       TOTAL         FECAL         FECAL         COUNT         TOTAL
                                                   SOLIDS                                                BACT.DENS.
                 SUBM                                              MPN           MPN           MF                          CU
                  ID    MG/L          MG/L          MG/L        NO/100ML      NO/100ML      NO/100ML       NO/ML          MG/L
  SAMPLES(FLAGS)          6(0)          6(0)          7(0)          5(0)          5(0)          5(0)          5(0)          7(0)
             LOW          488.          550.          392.          270.           22.           70.         2300.          .003
            HIGH         1083.         1030.          853.        13000.          850.          300.        60000.          .024
         AVERAGE          866.          808.          693.         3560.          256.          161.        17060.          .012
        STD.DEV.          217.          168.          153.         5343.          347.          110.        24536.          .008
     PERCNT:10TH
            25TH          766.          750.          627.          730.           50.           84.         3300.          .004
     MEDIAN 50TH          909.          790.          741.         1300.           80.           90.         4700.          .014
            75TH         1044.          940.          807.         2500.          280.          260.        15000.          .020
            90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  39                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                      SURFACE WATER DATA
STATION 00AL05EB2179    LAT. 53D 33M 13S  LONG. 113D 23M 54S   PR 3   UTM 12 341150E 5936300N  FOR MAY 18, 1983 TO OCT 12, 1983
GOLD BAR CREEK NEAR CONFLUENCE            WITH NORTH SASKATCHEWAN RIVER

                          30009L       26304L       13306L       25003L       28009L       42009L       27009L       33005L
                           ZINC         IRON       ALUMINUM    MANGANESE      NICKEL     MOLYBDENUM     COBALT      ARSENIC
                          TOTAL       EXTRBLE.     EXTRBLE.      TOTAL        TOTAL        TOTAL        TOTAL       TOTAL

                  SUBM     ZN           FE           AL           MN           NI           MO           CO           AS
                   ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             7(0)         7(0)         7(0)         7(0)         7(0)         7(0)         7(3)         7(0)
           LOW             .005          .71         .025         .268         .008         .007        L.001        .0010
          HIGH             .073         3.22        6.040         .908         .028         .015         .008        .0071
       AVERAGE             .036         1.86        1.706         .678         .018         .010         .004*       .0027
      STD.DEV.             .030         1.07        2.649         .243         .008         .003         .003*       .0021
  PERCNT:10TH
          25TH             .008          .83         .025         .437         .012         .007        L.001        .0013
   MEDIAN 50TH             .028         1.60         .265         .758         .016         .009         .004        .0019
          75TH             .067         3.02        5.070         .870         .028         .011         .006        .0037
          90TH
SECONDARY CODE
                          04304L       48009L       24009L       82302L       82009L       80015L       34005L       23009L
                         BERYLLIUM     CADMIUM     CHROMIUM       LEAD         LEAD       MERCURY     SELENIUM     VANADIUM
                          EXTRBLE.      TOTAL        TOTAL      EXTRBLE.      TOTAL        TOTAL       TOTAL        TOTAL

                  SUBM     BE           CD           CR           PB           PB           HG           SE           V
                   ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            7(7)         7(2)         7(0)         7(3)                      7(7)         7(6)         7(0)
           LOW            L.001        L.001         .004        L.003                     L.0001       L.0002        .004
          HIGH            L.001         .005         .025         .052                     L.0001        .0006        .020
       AVERAGE                          .002*        .011         .014*                                  .0003*       .011
      STD.DEV.                          .002*        .007         .018*                                  .0002*       .007
  PERCNT:10TH
          25TH            L.001        L.001         .007        L.003                     L.0001       L.0002        .005
   MEDIAN 50TH            L.001         .002         .010         .005                     L.0001       L.0002        .009
          75TH            L.001         .004         .012         .023                     L.0001       L.0002        .020
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  40                            NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                              SURFACE WATER DATA
STATION 00AL05EB2191    LAT. 53D 33M 12S  LONG. 113D 23M 34S   PR 3   UTM 12 341500E 5936250N  FOR MAY 18, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER     LEFT BANK     RUNDLE FOOT BRIDGE   -   90M UPSTREAM

                          97251F      02065F      08102F      02042F      02041L      10301L      08202L      08301L
                         DEPTH OF   TEMPERATURE   OXYGEN     SPECIFIC    SPECIFIC       PH        OXYGEN      OXYGEN
                         SAMPLING      WATER     DISSOLVED   CONDUCT.    CONDUCT.                BIOCHEM.   TOTAL COD
                  SUBM  FROM SURF.                                                             DEMAND-BOD
                   ID        M        DEG.C         O2       USIE/CM      US/CM     PH UNITS       O2          O2
                                                   MG/L                                           MG/L        MG/L
SAMPLES(FLAGS)             12(0)       12(0)      12(0)       12(0)       12(0)      12(0)       11(2)       12(0)
           LOW                .9          .5        7.7        290.        264.        8.1         L.3         1.6
          HIGH               3.4         21.       14.8        400.        344.        8.5         2.7         28.
       AVERAGE               1.7        14.4       10.1        350.        317.                    1.4*        11.4
      STD.DEV.                .7         6.5        2.1         38.         24.                     .9*         6.8
  PERCNT:10TH                1.1          5.        8.4        290.        291.        8.2         L.3         6.6
          25TH               1.2        11.1        8.6        320.        302.        8.2          .3         7.5
   MEDIAN 50TH               1.5        16.0        9.2        358.        321.        8.3         1.6        10.0
          75TH               1.9        19.0       11.6        380.        338.        8.4         2.1        14.0
          90TH               2.4         20.       12.6        390.        341.        8.5         2.6         19.
SECONDARY CODE

                          06536L      06005L      06154L      06107L      06905L      06715L      06721L      10151L
                         PHENOLIC     CARBON      CARBON      CARBON      CARBON     CHLORO -  CHLOROPHYLL  ALKALINITY
                         MATERIAL     TOTAL     DISSOLVED   DISSOLVED  PARTICULATE   PHYLL A       -A-        PHENOL
                          PHENOL     ORGANIC    INORGANIC    ORGANIC      TOTAL                 EPILITHON   PHTHALEIN
                  SUBM                  C           C           C           C                                CACO3
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L       MG/M3       MG/M2        MG/L
SAMPLES(FLAGS)             12(8)       11(0)       4(0)        4(0)        4(0)                               12(5)
           LOW             L.002         4.2         2.         2.2         .15                                 .0
          HIGH              .005         12.       35.4          4.        2.09                               L4.2
       AVERAGE              .002*        8.2       24.4         3.0         .84                                1.7*
      STD.DEV.              .001*        2.3       15.1          .9         .86                                2.2*
  PERCNT:10TH              L.002          6.                                                                    .0
          25TH             L.002         6.6       16.0         2.2         .33                                 .0
   MEDIAN 50TH             L.002         8.3       30.0         3.0         .57                                 .0
          75TH              .002         9.9       32.7         3.8        1.36                               L4.2
          90TH              .002         11.                                                                  L4.2
SECONDARY CODE

                          10101L      06301L      06201L      17203L      16306L      09107L      14102L      10602L
                        ALKALINITY   CARBONATE   BICARBONT.   CHLORIDE    SULPHATE    FLUORIDE    SILICA     HARDNESS
                          TOTAL      (CALCD.)     (CALCD.)   DISSOLVED   DISSOLVED   DISSOLVED   REACTIVE     TOTAL
                                                                                                            (CALCD.)
                  SUBM     CACO3        CO3         HCO3         CL          SO4          F         SIO2       CACO3
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             12(0)       12(5)       12(5)      12(12)       12(1)       12(0)       12(0)       12(0)
           LOW              114.          0.       Q132.         L0.         L5.         .12         3.0        113.
          HIGH              148.         Q5.        179.         L0.         45.         .15         5.5        165.
       AVERAGE              133.         2.*       157.*                    31.*         .13         4.1        143.
      STD.DEV.               11.         3.*        13.*                    10.*         .01          .7         14.
  PERCNT:10TH               117.          0.        139.         L0.         20.         .12         3.2        136.
          25TH              128.          0.        151.        L1.0         30.         .13         3.8        136.
   MEDIAN 50TH              132.          0.        158.        L1.0         35.         .13         4.1        141.
          75TH              141.          5.        165.        L1.0         35.         .14         4.5        153.
          90TH              147.         Q5.       Q170.         L0.         40.         .14         5.0        158.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  41                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                    SURFACE WATER DATA
STATION 00AL05EB2191    LAT. 53D 33M 12S  LONG. 113D 23M 34S   PR 3   UTM 12 341500E 5936250N  FOR MAY 18, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER     LEFT BANK     RUNDLE FOOT BRIDGE    -    90M UPSTREAM

                          20110L     12102L     11103L      19103L      15406L      15419L      07403L      07602L
                          CALCIUM    MAGNESIUM  SODIUM      POTASSIUM   PHOSPHOROUS PHOSPHORUS  NITROGEN    NITROGEN
                          DISSOLVED  DISSOLVED  DISSOLVED   DISSOLVED     TOTAL       TOTAL     TOTAL ORG.    TOTAL
                                                                        PHOSPHATE   PHOSPHATE   (CALCD.)    (CALCD.)
                    SUBM     CA         MG         NA          K            P           P           N           N
                     ID     MG/L       MG/L       MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             12(0)      12(0)      12(0)       12(0)       10(0)                   12(12)      12(12)
           LOW               32.         8.         2.          .5        .011                   Q.100       Q.550
          HIGH               48.        12.         7.         1.0        .122                   Q.100       Q.550
       AVERAGE               40.        10.3        4.7         .8        .043
      STD.DEV.                4.         1.1        1.5         .1        .042
  PERCNT:10TH                38.         9.         3.          .7        .012                   Q.100       Q.550
          25TH               38.        10.0        4.0         .8        .015                    .100        .550
   MEDIAN 50TH               40.        10.0        4.5         .9        .018                    .100        .550
          75TH               43.        11.0        5.5         .9        .076                    .100        .550
          90TH               45.        11.         7.          .9        .114                   Q.100       Q.550
SECONDARY CODE

                          07021L     07503L     07562L      07205L      07206L      07105L      07906L      10407L
                          NITROGEN   NITROGEN   NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    RESIDUE
                           TOTAL      TOTAL     DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   PARTICULATE NONFILTRABLE
                          KJELDAHL   AMMONIA    AMMONIA     NITRITE     NITRITE     NO3 & NO2   TOTAL
                    SUBM     N          N          N           N           N           N           N
                     ID     MG/L       MG/L       MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             12(12)     12(12)                 12(12)      12(12)      12(12)       4(1)        5(0)
           LOW              L.5        L.4                   L.05        L.007       L.05        L.01         11.
          HIGH              L.5        L.4                   L.05        L.007       L.05         .19         20.
       AVERAGE                                                                                    .065*       15.
      STD.DEV.                                                                                    .084*        4.
  PERCNT:10TH               L.5        L.4                   L.05        L.007       L.05
          25TH              L.500      L.40                  L.050       L.007       L.050        .015*       12.
   MEDIAN 50TH              L.500      L.40                  L.050       L.007       L.050        .030        15.
          75TH              L.500      L.40                  L.050       L.007       L.050        .115        15.
          90TH              L.5        L.4                   L.05        L.007       L.05
SECONDARY CODE             01L

                          10474L     10453L     00205L      36001L      36011L      36102L      36910L      29009L
                          RESIDUE    RESIDUE    TOTAL       COLIFORMS   COLIFORMS   STREP.      STD. PLATE  COPPER
                           TOTAL     FILTRABLE  DISSOLVED    TOTAL       FECAL       FECAL       COUNT       TOTAL
                                                SOLIDS                                          BACT.DENS.
                    SUBM                                      MPN         MPN         MF                     CU
                     ID     MG/L       MG/L       MG/L      NO/100ML    NO/100ML    NO/100ML     NO/ML       MG/L
SAMPLES(FLAGS)              5(0)       5(0)      12(0)       12(0)       12(0)       12(0)       11(0)       12(3)
           LOW              235.       220.       119.        410.         50.         20.        120.       L.001
          HIGH              320.       300.       193.      13000.       1000.        390.       2800.        .007
       AVERAGE              279.       264.       168.       2147.        299.        156.        637.        .003*
      STD.DEV.               38.        38.        20.       3490.        276.        124.        796.        .002*
  PERCNT:10TH                                     152.        540.         50.         30.        140.       L.001
          25TH              245.       230.       159.        645.        135.         60.        150.        .001*
   MEDIAN 50TH              282.       270.       170.        960.        215.        125.        340.        .002
          75TH              311.       300.       184.       1900.        355.        260.       1000.        .004
          90TH                                    188.       2800.        650.        320.       1100.        .006
SECONDARY CODE                                              02L         12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  42                      NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                         SURFACE WATER DATA
STATION 00AL05EB2191    LAT. 53D 33M 12S  LONG. 113D 23M 34S   PR 3   UTM 12 341500E 5936250N  FOR MAY 18, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER     LEFT BANK     RUNDLE FOOT BRIDGE   -    90M UPSTREAM

                           30009L      26304L      13306L      25003L      28009L      42009L      27009L      33005L
                            ZINC        IRON      ALUMINUM   MANGANESE     NICKEL   MOLYBDENUM    COBALT     ARSENIC
                           TOTAL      EXTRBLE.    EXTRBLE.     TOTAL       TOTAL       TOTAL       TOTAL      TOTAL

                 SUBM       ZN          FE          AL          MN          NI          MO          CO          AS
                  ID       MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             12(0)       12(0)        8(0)        9(2)       12(0)        8(8)      12(11)        7(1)
           LOW              .003         .04        .115       L.008        .003       L.001       L.001      L.0002
          HIGH              .050        1.35       3.310        .450        .016       L.001        .006       .0010
       AVERAGE              .032         .38        .846       .075*        .007                   .001*      .0005*
      STD.DEV.              .013         .36       1.048       .145*        .004                   .001*      .0003*
   PERCNT:10TH              .018         .14                                .003                   L.001
          25TH              .027         .17        .313        .010        .005       L.001       L.001       .0004
   MEDIAN 50TH              .034         .25        .438        .012        .005       L.001       L.001       .0004
          75TH              .039         .46        .919        .047        .008       L.001       L.001       .0006
          90TH              .050         .76                                .011                   L.001
SECONDARY CODE

                           04304L      48009L      24009L      82302L      82009L      80015L      34005L      23009L
                         BERYLLIUM    CADMIUM     CHROMIUM      LEAD        LEAD       MERCURY    SELENIUM    VANADIUM
                          EXTRBLE.     TOTAL       TOTAL      EXTRBLE.     TOTAL       TOTAL      TOTAL        TOTAL

                 SUBM       BE          CD          CR          PB          PB          HG          SE          V
                  ID       MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              8(8)       12(9)       12(0)                   12(7)                    7(5)        8(4)
           LOW             L.001       L.001        .003                   L.003                  L.0002       L.002
          HIGH             L.001        .006        .015                    .112                   .0007        .011
       AVERAGE                         .002*        .006                   .013*                  .0003*       .003*
      STD.DEV.                         .001*        .004                   .031*                  .0002*       .003*
   PERCNT:10TH                         L.001        .003                   L.003
          25TH             L.001       L.001        .004                   L.003                  L.0002       L.002
   MEDIAN 50TH             L.001       L.001        .005                   L.003                  L.0002       .002*
          75TH             L.001       .001*        .009                    .007                   .0004        .003
          90TH                          .003        .011                    .008
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  43                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                        SURFACE WATER DATA
STATION 00AL05EB2192    LAT. 53D 33M 11S  LONG. 113D 23M 40S   PR 3   UTM 12 341400E 5936250N  FOR MAY 18, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER   -    CENTRE      RUNDLE FOOT BRIDGE   -    90M UPSTREAM

                         97251F      02065F       08102F       02042F       02041L       10301L       08202L       08301L
                        DEPTH OF   TEMPERATURE    OXYGEN      SPECIFIC     SPECIFIC       PH          OXYGEN       OXYGEN
                        SAMPLING     WATER       DISSOLVED    CONDUCT.     CONDUCT.                  BIOCHEM.     TOTAL COD
                                                                                                   DEMAND-BOD
                 SUBM  FROM SURF.                   02                                                  02          02
                  ID       M          DEG.C        MG/L       USIE/CM       US/CM       PH UNITS       MG/L        MG/L
SAMPLES(FLAGS)          12(0)        12(0)        12(0)        12(0)        12(0)        12(0)        12(2)       12(0)
           LOW            1.1           .5          7.6         295.         262.          8.2          L.3          5.6
          HIGH            2.7         20.5         14.4         400.         344.          8.5          2.8         27.
       AVERAGE            1.8         14.2          9.9         353.         316.                       1.2*        12.7
      STD.DEV.             .5          6.3          2.1          36.          25.                        .9*         6.3
  PERCNT:10TH             1.2          5.           8.2         300.         289.          8.2          L.3          6.7
          25TH            1.2         11.1          8.5         320.         302.          8.3           .5          7.2
    MEDIAN 50TH           1.8         16.0          9.0         360.         320.          8.4          1.0         11.5
          75TH            2.1         18.8         11.6         380.         338.          8.4          1.5         17.5
          90TH            2.4         19.          12.2         390.         341.          8.5          2.8         18.
SECONDARY CODE

                         06536L      06005L       06154L       06107L       06905L       06715L       06721L       10151L
                        PHENOLIC     CARBON       CARBON       CARBON       CARBON      CHLORO -    CHLOROPHYLL   ALKALINITY
                        MATERIAL     TOTAL       DISSOLVED    DISSOLVED   PARTICULATE   PHYLL A        -A-         PHENOL
                         PHENOL     ORGANIC      INORGANIC     ORGANIC       TOTAL                  EPILITHON    PHTHALEIN
                 SUBM                  C            C            C            C                                   CACO3
                  ID     MG/L        MG/L         MG/L         MG/L         MG/L          MG/M3        MG/M2       MG/L
SAMPLES(FLAGS)          12(10)       11(0)                                                                        12(9)
           LOW           L.002        5.                                                                             .0
          HIGH            .005       12.                                                                           L4.2
       AVERAGE            .002*       8.2                                                                           3.1*
      STD.DEV.            .001*       2.3                                                                           1.9*
  PERCNT:10TH            L.002        5.7                                                                           0.
          25TH           L.002        5.8                                                                           2.1*
    MEDIAN 50TH          L.002        9.                                                                           L4.2
          75TH           L.002        9.8                                                                          L4.2
          90TH            .003       11.                                                                           L4.2
SECONDARY CODE

                         10101L      06301L       06201L       17203L       16306L       09107L       14102L       10602L
                       ALKALINITY   CARBONATE   BICARBONT.    CHLORIDE     SULPHATE     FLUORIDE      SILICA      HARDNESS
                          TOTAL     (CALCD.)      (CALCD.)    DISSOLVED    DISSOLVED    DISSOLVED    REACTIVE       TOTAL
                                                                                                                 (CALCD.)
                 SUBM    CACO3        CO3          HCO3          CL          SO4           F           SIO2        CACO3
                  ID     MG/L        MG/L         MG/L          MG/L        MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          12(0)        12(9)         12(9)        12(12)       12(1)        12(0)        12(0)       12(0)
           LOW           113.          0.          Q128.         L0.          L5.          .12          3.0         110.
          HIGH           148.         Q5.          Q170.         L0.          40.          .15          5.5         159.
       AVERAGE           132.          4.*          154.*                     31.*         .13          4.1         143.
      STD.DEV.            11.          2.*           13.*                     10.*         .01           .7          13.
  PERCNT:10TH            116.          0.          Q131.         L0.          25.          .12          3.2         136.
          25TH           128.          3.           148.         L1.0         29.          .12          3.7         138.
    MEDIAN 50TH          132.          5.           155.         L1.0         30.          .13          4.1         141.
          75TH           141.          5.           164.         L1.0         39.          .14          4.5         155.
          90TH           146.         Q5.          Q168.         L0.          40.          .15          5.0         156.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  44                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                    SURFACE WATER DATA
STATION 00AL05EB2192    LAT. 53D 33M 11S  LONG. 113D 23M 40S   PR 3   UTM 12 341400E 5936250N  FOR MAY 18, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER    -   CENTRE     RUNDLE FOOT BRIDGE   -    90M UPSTREAM

                      20110L        12102L        11103L        19103L        15406L        15419L        07403L        07602L
                      CALCIUM       MAGNESIUM     SODIUM        POTASSIUM     PHOSPHOROUS   PHOSPHORUS    NITROGEN      NITROGEN
                      DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     TOTAL         TOTAL         TOTAL ORG.    TOTAL
                                                                              PHOSPHATE     PHOSPHATE     (CALCD.)      (CALCD.)
                 SUBM CA            MG            NA            K             P             P             N             N
                  ID  MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)             12(0)         12(0)         12(0)         12(0)         10(0)          5(0)        12(12)        12(12)
              LOW            31.            8.            2.            .5          .007          .011         Q.100         Q.550
             HIGH            46.           12.            7.           1.0          .138          .022        Q1.000        Q1.450
          AVERAGE            41.          10.2           4.3            .8          .044          .016
         STD.DEV.             4.           1.0           1.4            .1          .046          .004
      PERCNT:10TH            38.            9.            3.            .7          .010                       Q.100         Q.550
             25TH            39.          10.0           3.5            .8          .014          .015          .100          .550
      MEDIAN 50TH            41.          10.0           4.0            .9          .018          .017          .100          .550
             75TH            44.          11.0           5.0            .9          .056          .017          .100          .550
             90TH            44.           11.            6.           1.0          .127                       Q.300         Q.750
   SECONDARY CODE                                                                                  21L

                      07021L        07503L        07562L        07205L        07206L        07105L        07906L        10407L
                      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      RESIDUE
                      TOTAL         TOTAL         DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     PARTICULATE   NONFILTRABLE
                      KJELDAHL      AMMONIA       AMMONIA       NITRITE       NITRITE       NO3 & NO2     TOTAL
                 SUBM N             N             N             N             N             N             N
                  ID  MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)             12(6)        12(12)          5(0)        12(12)        12(12)        12(12)                        5(0)
              LOW           .110           L.4          .004          L.05         L.007          L.05                         10.
             HIGH            1.4           L.4          .012          L.05         L.007          L.05                         23.
          AVERAGE          .430*                        .009                                                                   14.
         STD.DEV.          .353*                        .003                                                                    5.
      PERCNT:10TH           .130           L.4                        L.05         L.007          L.05
             25TH           .140          L.40          .009         L.050         L.007         L.050                         11.
      MEDIAN 50TH          L.500          L.40          .010         L.050         L.007         L.050                         12.
             75TH          L.500          L.40          .011         L.050         L.007         L.050                         14.
             90TH            L.5           L.4                        L.05         L.007          L.05
   SECONDARY CODE            01L

                      10474L        10453L        00205L        36001L        36011L        36102L        36910L        29009L
                      RESIDUE       RESIDUE       TOTAL         COLIFORMS     COLIFORMS     STREP.        STD. PLATE    COPPER
                      TOTAL         FILTRABLE     DISSOLVED     TOTAL         FECAL         FECAL         COUNT         TOTAL
                                                  SOLIDS                                                  BACT.DENS.
                 SUBM                                           MPN           MPN           MF                          CU
                  ID  MG/L          MG/L          MG/L          NO/100ML      NO/100ML      NO/100ML      NO/ML         MG/L
SAMPLES(FLAGS)              5(0)          5(0)         12(0)         12(0)         12(0)         12(0)         11(0)         12(5)
              LOW           194.          180.          118.          500.           40.           50.          110.         L.001
             HIGH           323.          300.          192.         8200.          740.          310.         3100.          .037
          AVERAGE           256.          242.          167.         1464.          237.          124.          595.         .006*
         STD.DEV.            47.           44.           19.         2163.          210.           87.          859.         .010*
      PERCNT:10TH                                       158.          500.           50.           50.          120.         L.001
             25TH           241.          230.          159.          535.           70.           56.          140.         L.001
      MEDIAN 50TH           252.          240.          167.          715.          180.           95.          320.          .003
             75TH           270.          260.          183.         1200.          335.          175.          640.          .005
             90TH                                       186.         1900.          460.          240.          780.          .006
   SECONDARY CODE                                                      02L           12L
 * THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  45                        NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                          SURFACE WATER DATA
STATION 00AL05EB2192    LAT. 53D 33M 11S  LONG. 113D 23M 40S   PR 3   UTM 12 341400E 5936250N  FOR MAY 18, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER   -   CENTRE     RUNDLE FOOT BRIDGE   -    90M UPSTREAM

                         30009L      26304L      13306L      25003L      28009L      42009L      27009L      33005L
                          ZINC        IRON      ALUMINUM   MANGANESE    NICKEL    MOLYBDENUM    COBALT     ARSENIC
                         TOTAL      EXTRBLE.    EXTRBLE.     TOTAL       TOTAL       TOTAL       TOTAL      TOTAL

                  SUBM     ZN          FE          AL          MN          NI          MO          CO          AS
                   ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           12(0)       12(0)        8(0)        9(2)       12(0)        8(8)       12(9)        7(2)
           LOW            .017         .04        .191        L.008        .003       L.001       L.001      L.0002
          HIGH            .073        1.31       3.740         .120        .014       L.001        .005       .0009
       AVERAGE            .039         .41       1.019         .030*       .007                    .002*      .0005*
      STD.DEV.            .015         .41       1.252         .037*       .004                    .001*      .0003*
   PERCNT:10TH            .021         .11                                 .003                   L.001
          25TH            .030         .13        .257         .009        .005       L.001       L.001      L.0002
   MEDIAN 50TH            .037         .24        .500         .010        .005       L.001       L.001       .0005
          75TH            .047         .56       1.356         .044        .009       L.001        .002*      .0009
          90TH            .054        1.07                                 .013                    .003
SECONDARY CODE

                         04304L      48009L      24009L      82302L      82009L      80015L      34005L      23009L
                        BERYLLIUM    CADMIUM    CHROMIUM      LEAD        LEAD      MERCURY    SELENIUM    VANADIUM
                         EXTRBLE.     TOTAL       TOTAL     EXTRBLE.      TOTAL       TOTAL      TOTAL       TOTAL

                  SUBM     BE          CD          CR          PB          PB          HG          SE          V
                   ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            8(8)       12(10)      12(0)                    12(8)                    7(6)        7(4)
           LOW           L.001       L.001        .003                    L.003                  L.0002       L.002
          HIGH           L.001        .002        .013                     .018                   .0006        .012
       AVERAGE                        .001*       .006                     .005*                  .0003*       .004*
      STD.DEV.                        .000*       .003                     .004*                  .0002*       .004*
   PERCNT:10TH                       L.001        .003                    L.003
          25TH           L.001       L.001        .003                    L.003                  L.0002       L.002
   MEDIAN 50TH           L.001       L.001        .005                    L.003                  L.0002       L.002
          75TH           L.001       L.001        .007                     .006                  L.0002        .004
          90TH                        .002        .009                     .008
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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NAQUADAT SUMMARY REPORT APR 30, 1986
SURFACE WATER DATA

STATION 00AL05EB2193 LAT. 53D 33M 9S LONG. 113D 23M 43S PR 3 UTM 12 341300E 5936200N FOR MAY 18, 1982 TO NOV 02, 1982
NORTH SASKATCHEWAN RIVER RIGHT BANK RUNDLE FOOT BRIDGE - 90M UPSTREAM

	SUBM ID	97251F DEPTH OF SAMPLING FROM SURF. M	02065F TEMPERATURE WATER DEG.C	08102F OXYGEN DISSOLVED O2 MG/L	02042F SPECIFIC CONDUCT. USIE/CM	02041L SPECIFIC CONDUCT. US/CM	10301L PH PH UNITS	08202L OXYGEN BIOCHEM. DEMAND-BOD O2 MG/L	08301L OXYGEN TOTAL COD O2 MG/L
SAMPLES(FLAGS)		12(0)	12(0)	12(0)	12(0)	12(0)	12(0)	12(0)	12(0)
LOW		.6	.5	7.6	290.	264.	7.7	.3	4.5
HIGH		2.4	21.	14.4	540.	425.	8.5	3.1	26.
AVERAGE		1.1	14.4	10.0	377.	332.		1.3	13.0
STD.DEV.		.5	6.3	2.0	68.	40.		.9	6.5
PERCNT:10TH		.6	5.	8.3	310.	290.	8.1	.4	5.1
25TH		.8	11.6	8.6	318.	310.	8.1	.8	8.5
MEDIAN 50TH		1.1	16.0	9.3	388.	332.	8.2	1.0	12.5
75TH		1.3	19.0	11.5	405.	346.	8.3	1.7	17.3
90TH		1.5	19.5	12.2	420.	357.	8.4	2.7	20.
SECONDARY CODE									

	SUBM ID	06536L PHENOLIC MATERIAL PHENOL MG/L	06005L CARBON TOTAL ORGANIC C MG/L	06154L CARBON DISSOLVED INORGANIC C MG/L	06107L CARBON DISSOLVED ORGANIC C MG/L	06905L CARBON PARTICULATE TOTAL C MG/L	06715L CHLORO - PHYLL A MG/M3	06721L CHLOROPHYLL -A- EPILITHON MG/M2	10151L ALKALINITY PHENOL PHTHALEIN CACO3 MG/L
SAMPLES(FLAGS)		12(8)	11(0)	4(1)	4(0)	4(0)			12(3)
LOW		L.002	5.	L0.	1.7	.24			.0
HIGH		.008	14.	35.4	4.	1.84			L4.2
AVERAGE		.003*	7.9	24.4*	3.0	.95			1.0*
STD.DEV.		.002*	2.5	15.8*	1.1	.67			1.9*
PERCNT:10TH		L.002	6.1						.0
25TH		L.002	6.1	15.5*	2.0	.49			.0
MEDIAN 50TH		L.002	7.2	30.6	3.2	.85			.0
75TH		.002	9.2	33.2	4.0	1.40			2.1*
90TH		.003	10.						L4.2
SECONDARY CODE									

	SUBM ID	10101L ALKALINITY TOTAL CACO3 MG/L	06301L CARBONATE (CALCD.) CO3 MG/L	06201L BICARBONT. (CALCD.) HCO3 MG/L	17203L CHLORIDE DISSOLVED CL MG/L	16306L SULPHATE DISSOLVED SO4 MG/L	09107L FLUORIDE DISSOLVED F MG/L	14102L SILICA REACTIVE SIO2 MG/L	10602L HARDNESS TOTAL (CALCD.) CACO3 MG/L
SAMPLES(FLAGS)		12(0)	12(3)	12(3)	12(9)	12(0)	12(0)	12(0)	12(0)
LOW		113.	0.	138.	L0.	15.	.11	3.2	113.
HIGH		147.	Q5.	179.	9.	52.	.32	5.6	168.
AVERAGE		133.	1.*	160.*	1.9*	35.	.16	4.2	145.
STD.DEV.		11.	2.*	13.*	2.3*	10.	.06	.8	15.
PERCNT:10TH		116.	0.	141.	L0.	28.	.12	3.2	136.
25TH		130.	0.	148.	L1.0	30.	.12	3.8	138.
MEDIAN 50TH		133.	0.	162.	L1.0	35.	.14	4.1	143.
75TH		141.	3.	167.	1.5*	40.	.15	4.8	156.
90TH		147.	Q5.	178.	3.	50.	.22	5.2	162.
SECONDARY CODE									

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0004 -  0006 PAGE  47                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                     SURFACE WATER DATA
STATION 00AL05EB2193    LAT. 53D 33M  9S  LONG. 113D 23M 43S   PR 3   UTM 12 341300E 5936200N  FOR MAY 18, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     RUNDLE FOOT BRIDGE  -     90M UPSTREAM

                           20110L        12102L        11103L        19103L        15406L        15419L        07403L        07602L
                          CALCIUM      MAGNESIUM       SODIUM      POTASSIUM    PHOSPHOROUS    PHOSPHORUS     NITROGEN      NITROGEN
                         DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED       TOTAL         TOTAL       TOTAL ORG.      TOTAL
                                                                              PHOSPHATE     PHOSPHATE      (CALCD.)      (CALCD.)
                  SUBM       CA            MG            NA            K             P             P             N             N
                   ID       MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
    SAMPLES(FLAGS)          12(0)         12(0)         12(0)         12(0)         10(0)                      12(11)        12(11)
               LOW            32.            8.            2.            .5          .016                       Q.100         Q.550
              HIGH            49.           12.           15.          10.0          .444                        .300         3.150
           AVERAGE            41.          10.4           6.0           1.8          .102                        .133*         .805*
          STD.DEV.             4.           1.2           3.2           2.6          .126                        .078*         .742*
       PERCNT:10TH            38.            9.            3.            .8          .022                       Q.100         Q.550
              25TH            39.          10.0           5.0            .9          .044                        .100          .550
       MEDIAN 50TH            41.          10.5           5.5           1.0          .051                        .100          .550
              75TH            44.          11.0           6.5           1.1          .111                        .100          .680
              90TH            45.           12.            7.           2.1          .283                       Q.300         Q.750
SECONDARY CODE

                           07021L        07503L        07562L        07205L        07206L        07105L        07906L        10407L
                          NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      RESIDUE
                           TOTAL         TOTAL       DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED    PARTICULATE  NONFILTRABLE
                         KJELDAHL       AMMONIA       AMMONIA       NITRITE       NITRITE      NO3 & NO2       TOTAL
                  SUBM       N             N             N             N             N             N             N
                   ID       MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
    SAMPLES(FLAGS)         12(10)        12(11)                      12(11)        12(11)         12(9)          4(0)          5(0)
               LOW           L.5           L.4                        L.05         L.002          L.05           .02            8.
              HIGH           2.9           2.6                         .13           .02           .25           .19           24.
           AVERAGE           .717*          .58*                       .057*         .008*         .088*         .078           14.
          STD.DEV.           .690*          .64*                       .023*         .004*         .071*         .078            6.
       PERCNT:10TH           L.5           L.4                        L.05         L.007          L.05
              25TH         L.500          L.40                       L.050         L.007         L.050          .025           11.
       MEDIAN 50TH         L.500          L.40                       L.050         L.007         L.050          .050           13.
              75TH         L.500          L.40                       L.050         L.007          .115*         .130           14.
              90TH            .7           L.4                        L.05         L.007           .18
SECONDARY CODE            01L

                           10474L        10453L        00205L        36001L        36011L        36102L        36910L        29009L
                          RESIDUE       RESIDUE        TOTAL       COLIFORMS     COLIFORMS       STREP.     STD. PLATE      COPPER
                           TOTAL       FILTRABLE     DISSOLVED       TOTAL         FECAL         FECAL         COUNT         TOTAL
                                                      SOLIDS                                                BACT.DENS.
                  SUBM                                              MPN           MPN            MF                          CU
                   ID       MG/L          MG/L          MG/L       NO/100ML      NO/100ML      NO/100ML        NO/ML         MG/L
    SAMPLES(FLAGS)           5(0)          5(0)         12(0)         12(0)         12(0)         12(0)         11(0)         12(4)
               LOW           234.          220.          128.          670.           70.           30.          200.         L.001
              HIGH           274.          260.          213.        44000.         3300.         1200.         5400.          .006
           AVERAGE           256.          242.          176.        11181.         1106.          463.         1327.          .003*
          STD.DEV.            17.           16.           21.        13558.          978.          388.         1652.          .002*
       PERCNT:10TH                                       166.         1100.          190.          100.          300.         L.001
              25TH           243.          230.          168.         1150.          285.          215.          540.         L.001
       MEDIAN 50TH           258.          250.          175.         7350.          950.          310.          710.          .002
              75TH           271.          250.          187.        15500.         1500.          695.          910.          .005
              90TH                                       197.        30000.         2300.         1100.         3700.          .005
SECONDARY CODE                                                     02L           12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  48                     NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                       SURFACE WATER DATA
STATION 00AL05EB2193    LAT. 53D 33M  9S  LONG. 113D 23M 43S   PR 3   UTM 12 341300E 5936200N  FOR MAY 18, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     RUNDLE FOOT BRIDGE  -    90M UPSTREAM

                          30009L       26304L       13306L       25003L       28009L       42009L       27009L       33005L
                           ZINC         IRON       ALUMINUM    MANGANESE      NICKEL     MOLYBDENUM     COBALT      ARSENIC
                          TOTAL       EXTRBLE.     EXTRBLE.      TOTAL        TOTAL        TOTAL        TOTAL       TOTAL

                  SUBM      ZN           FE           AL           MN           NI           MO           CO           AS
                   ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            12(0)        12(1)         8(0)         9(2)        12(1)         8(8)        12(10)        7(0)
           LOW             .015         L.02         .139        L.008        L.001        L.001        L.001        .0003
          HIGH             .048         1.09        3.730         .119         .018        L.001         .004        .0011
       AVERAGE             .031          .31*        .939         .031*        .006*                     .001*       .0005
      STD.DEV.             .010          .28*       1.227         .037*        .004*                     .001*       .0003
  PERCNT:10TH              .019          .12                                   .003                     L.001
          25TH             .025          .15         .320         .010         .004        L.001        L.001        .0003
   MEDIAN 50TH             .031          .23         .430         .012         .005        L.001        L.001        .0004
          75TH             .038          .38        1.073         .044         .006        L.001        L.001        .0005
          90TH             .041          .54                                   .010                      .003
SECONDARY CODE

                          04304L       48009L       24009L       82302L       82009L       80015L       34005L       23009L
                         BERYLLIUM     CADMIUM     CHROMIUM       LEAD         LEAD        MERCURY     SELENIUM     VANADIUM
                          EXTRBLE.      TOTAL        TOTAL      EXTRBLE.       TOTAL        TOTAL       TOTAL        TOTAL

                  SUBM      BE           CD           CR           PB           PB           HG           SE           V
                   ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             8(8)        12(10)       12(1)                     12(10)                     7(6)         7(4)
           LOW            L.001        L.001        L.001                     L.003                     L.0002       L.002
          HIGH            L.001         .014         .013                      .018                      .0006        .013
       AVERAGE                          .002*        .005*                     .004*                     .0003*       .004*
      STD.DEV.                          .004*        .003*                     .004*                     .0002*       .004*
  PERCNT:10TH                          L.001         .003                     L.003
          25TH            L.001        L.001         .004                     L.003                     L.0002       L.002
   MEDIAN 50TH            L.001        L.001         .004                     L.003                     L.0002       L.002
          75TH            L.001        L.001         .007                     L.003                     L.0002        .003
          90TH                          .002         .010                      .004
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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                                                        SURFACE WATER DATA
STATION 00AL05EB2221    LAT. 53D 34M 28S  LONG. 113D 23M 18S   PR 3   UTM 12 341850E 5938600N  FOR MAY 18, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER     LEFT BANK     BEVERLY RAILWAY TRESTLE
 180M DOWNSTREAM

                           97251F       02065F       08102F       02042F       02041L       10301L       08202L       08301L
                          DEPTH OF    TEMPERATURE     OXYGEN      SPECIFIC     SPECIFIC        PH         OXYGEN       OXYGEN
                          SAMPLING       WATER      DISSOLVED     CONDUCT.     CONDUCT.                  BIOCHEM.    TOTAL COD
                                                                                                        DEMAND-BOD
                  SUBM   FROM SURF.                     02                                                  02           02
                   ID         M          DEG.C         MG/L       USIE/CM        US/CM      PH UNITS       MG/L         MG/L
SAMPLES(FLAGS)                19(0)        23(0)        23(0)        21(0)        24(0)        24(0)        21(9)        24(2)
           LOW                   .3           .5          6.2         290.         264.          7.8          L.0         L5.0
          HIGH                  2.7         24.5         14.8         410.         374.          8.6          2.8         29.5
       AVERAGE                  1.4         13.5          9.8         348.         322.                       1.2*        13.1*
      STD.DEV.                   .6          7.0          2.3          35.          24.                        .8*         6.5*
   PERCNT:10TH                   .5          1.0          7.2         310.         290.          8.1          L.3          7.1
          25TH                   1.          8.1          8.5         320.         311.          8.1           .9          8.8
   MEDIAN 50TH                  1.2          16.          9.2         350.         322.          8.3         L1.0         11.4
          75TH                  1.8          19.         11.6         375.         339.          8.4          1.6         17.5
          90TH                  2.1         19.5         13.2         390.         350.          8.5          2.5         21.3
SECONDARY CODE                                                                                                            04L

                           06536L       06005L       06154L       06107L       06905L       06715L       06721L       10151L
                          PHENOLIC      CARBON       CARBON       CARBON       CARBON      CHLORO -   CHLOROPHYLL   ALKALINITY
                          MATERIAL       TOTAL      DISSOLVED    DISSOLVED   PARTICULATE   PHYLL A        -A-         PHENOL
                           PHENOL       ORGANIC     INORGANIC     ORGANIC       TOTAL                  EPILITHON    PHTHALEIN
                  SUBM                     C            C            C            C                                  CACO3
                   ID        MG/L         MG/L         MG/L         MG/L         MG/L        MG/M3        MG/M2         MG/L
SAMPLES(FLAGS)               24(17)         9(0)        16(2)        16(0)        16(0)        10(0)        10(0)       22(11)
           LOW                L.002           6.          L0.           .6          .04          .79        8.433           .0
          HIGH                 .004          11.         36.0          6.7         7.54         3.11       63.261          6.7
       AVERAGE                 .002*         7.8         28.8*         2.4         1.77         1.81       23.172          2.4*
      STD.DEV.                 .001*         1.7         11.1*         1.8         2.04          .79       16.109          2.3*
   PERCNT:10TH                L.002                      L1.0           .6          .07         1.00        8.459           .0
          25TH                L.002          6.4         30.0          1.1          .68         1.25       10.432           0.
   MEDIAN 50TH                L.002           7.         33.0          1.9         1.04         1.42       21.347         L4.2
          75TH                 .003           9.         35.0          3.7         1.98         2.67       26.888         L4.2
          90TH                 .003                      35.4          4.7         5.50         2.91       46.950         L4.2
SECONDARY CODE                  37L

                           10101L       06301L       06201L       17203L       16306L       09107L       14102L       10602L
                         ALKALINITY    CARBONATE   BICARBONT.    CHLORIDE     SULPHATE     FLUORIDE      SILICA      HARDNESS
                            TOTAL       (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED    DISSOLVED    REACTIVE       TOTAL
                                                                                                                     (CALCD.)
                  SUBM      CACO3         C03         HC03          CL           S04           F          SIO2         CACO3
                   ID        MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)                24(0)       22(11)       22(11)       24(23)        24(1)        24(0)        24(0)        24(0)
           LOW                 113.           0.        Q128.          L.0          L5.          .10          1.8         115.
          HIGH                 149.           8.         182.          3.0          53.          .15          5.9         180.
       AVERAGE                 132.           3.*        155.*         1.0*         34.*         .13          3.8         148.
      STD.DEV.                   9.           3.*         13.*          .5*          9.*         .01          1.0          14.
   PERCNT:10TH                 121.           0.        Q142.          L0.          25.          .11          2.3         136.
          25TH                 127.           0.        Q146.         L1.0          30.          .12          3.1         139.
   MEDIAN 50TH                 131.           5.         154.         L1.0          35.          .13          3.8         147.
          75TH                 137.          Q5.         163.         L1.0          40.          .14          4.5         155.
          90TH                 147.          Q5.        Q170.          L0.          45.          .15          5.0         168.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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NAQUADAT SUMMARY REPORT APR 30, 1986
SURFACE WATER DATA

STATION 00AL05EB2221 LAT. 53D 34M 28S LONG. 113D 23M 18S PR 3 UTM 12 341850E 5938600N FOR MAY 18, 1982 TO FEB 29, 1984
NORTH SASKATCHEWAN RIVER LEFT BANK BEVERLY RAILWAY TRESTLE
180M DOWNSTREAM

SUBM ID	20110L CALCIUM DISSOLVED CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	11103L SODIUM DISSOLVED NA MG/L	19103L POTASSIUM DISSOLVED K MG/L	15406L PHOSPHOROUS TOTAL PHOSPHATE P MG/L	15419L PHOSPHORUS TOTAL PHOSPHATE P MG/L	07403L NITROGEN TOTAL ORG. (CALCD.) N MG/L	07602L NITROGEN TOTAL (CALCD.) N MG/L
SAMPLES(FLAGS)	24(0)	24(0)	24(0)	24(0)	10(0)	12(0)	12(12)	24(22)
LOW	33.	8.	2.	.5	.012	.008	Q.100	Q.170
HIGH	49.	14.	8.	1.2	.15	.164	Q.200	Q.650
AVERAGE	41.	11.2	4.8	.8	.048	.038		.425*
STD.DEV.	4.	1.3	1.4	.2	.049	.045		.169*
PERCNT:10TH	38.	10.	3.	.6	.013	.008	Q.100	.190
25TH	39.	10.0	4.0	.7	.014	.012	.100	.240
MEDIAN 50TH	41.	11.0	5.0	.8	.026	.019	.100	.550
75TH	43.	12.0	6.0	.9	.06	.049	.100	.550
90TH	46.	13.	6.0	1.1	.137	.076	Q.100	Q.570
SECONDARY CODE						21L		

SUBM ID	07021L NITROGEN TOTAL KJELDAHL N MG/L	07503L NITROGEN TOTAL AMMONIA N MG/L	07562L NITROGEN DISSOLVED AMMONIA N MG/L	07205L NITROGEN DISSOLVED NITRITE N MG/L	07206L NITROGEN DISSOLVED NITRITE N MG/L	07105L NITROGEN DISSOLVED NO3 & NO2 N MG/L	07906L NITROGEN PARTICULATE TOTAL N MG/L	10407L RESIDUE NONFILTRABLE MG/L
SAMPLES(FLAGS)	24(11)	12(12)	12(0)	24(24)	12(12)	24(21)	16(5)	17(0)
LOW	.120	L.4	.006	L.05	L.007	L.05	L.01	5.
HIGH	.6	L.4	.120	L.050	L.007	.15	.32	154.
AVERAGE	.369*		.027			.056*	.079*	28.
STD.DEV.	.166*		.032			.021*	.100*	38.
PERCNT:10TH	.140	L.4	.006	L.05	L.007	L.05	L.01	5.
25TH	.190	L.40	.007	L.050	L.007	L.050	L.010	8.
MEDIAN 50TH	L.500	L.40	.019	L.050	L.007	L.050	.040	12.
75TH	L.500	L.40	.032	L.050	L.007	L.050	.095	22.
90TH	L.5	L.4	.040	L.05	L.007	.060	.32	73.
SECONDARY CODE	01L							

SUBM ID	10474L RESIDUE TOTAL MG/L	10453L RESIDUE FILTRABLE MG/L	00205L TOTAL DISSOLVED SOLIDS MG/L	36001L COLIFORMS TOTAL MPN NO/100ML	36011L COLIFORMS FECAL MPN NO/100ML	36102L STREP. FECAL MF NO/100ML	36910L STD. PLATE COUNT BACT.DENS. NO/ML	29009L COPPER TOTAL CU MG/L
SAMPLES(FLAGS)	17(0)	17(0)	24(0)	21(0)	21(1)	21(0)	20(0)	24(13)
LOW	176.	170.	120.	200.	L10.	10.	80.	L.001
HIGH	384.	310.	206.	14000.	2900.	820.	54000.	.007
AVERAGE	267.	239.	172.	2704.	440.*	136.	4197.	.002*
STD.DEV.	50.	32.	17.	3424.	741.*	177.	12236.	.002*
PERCNT:10TH	218.	210.	160.	320.	50.	20.	155.	L.001
25TH	241.	220.	162.	800.	76.	30.	260.	L.001
MEDIAN 50TH	258.	230.	174.	1200.	170.	78.	550.	L.001
75TH	282.	260.	184.	2900.	310.	180.	1015.	.003
90TH	333.	280.	188.	7800.	810.	250.	9650.	.006
SECONDARY CODE				02L	12L			

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0007 -  0009 PAGE  51                   NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                   SURFACE WATER DATA
STATION 00AL05EB2221    LAT. 53D 34M 28S  LONG. 113D 23M 18S   PR 3   UTM 12 341850E 5938600N  FOR MAY 18, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER     LEFT BANK     BEVERLY RAILWAY TRESTLE
 180M DOWNSTREAM
                      30009L      26304L      13306L      25003L      28009L      42009L      27009L      33005L
                       ZINC        IRON      ALUMINUM   MANGANESE     NICKEL    MOLYBDENUM    COBALT     ARSENIC
                      TOTAL      EXTRBLE.    EXTRBLE.     TOTAL       TOTAL       TOTAL       TOTAL      TOTAL

                SUBM   ZN          FE          AL          MN          NI          MO          CO          AS
                 ID   MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)        24(2)       24(0)       20(0)       21(5)       24(4)       20(17)      24(22)      16(2)
           LOW        L.001         .05        .035       L.008       L.001       L.001       L.001      L.0002
          HIGH         .054        1.57       4.110        .135        .013        .007        .005       .003
       AVERAGE         .017*        .37        .668        .027*       .005*       .002*       .001*      .0007*
      STD.DEV.         .015*        .39       1.107        .031*       .003*       .002*       .001*      .0007*
   PERCNT:10TH         .002         .07        .060       L.008       L.001       L.001       L.001      L.0002
          25TH         .004         .12        .105        .009        .003       L.001       L.001       .0004
   MEDIAN 50TH         .013         .20        .210        .013        .004       L.001       L.001       .0005
          75TH         .029         .59        .501        .031        .006       L.001       L.001       .0008
          90TH         .041         .90       2.560        .047        .011        .005       L.001       .0011
SECONDARY CODE

                      04304L      48009L      24009L      82302L      82009L      80015L      34005L      23009L
                    BERYLLIUM    CADMIUM     CHROMIUM      LEAD        LEAD      MERCURY     SELENIUM    VANADIUM
                     EXTRBLE.     TOTAL       TOTAL      EXTRBLE.      TOTAL       TOTAL      TOTAL        TOTAL

                SUBM   BE          CD          CR          PB          PB          HG          SE          V
                 ID   MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)        20(20)      24(20)      24(7)        9(6)       12(9)       12(12)      16(15)      19(10)
           LOW        L.001       L.001       L.001       L.003       L.003      L.0001      L.0002       L.002
          HIGH        L.001        .003        .013        .010        .018      L.0001       .0003        .020
       AVERAGE                     .001*       .004*       .004*       .004*                  .0002*       .005*
      STD.DEV.                     .001*       .003*       .002*       .004*                  .0000*       .005*
   PERCNT:10TH        L.001       L.001       L.001                   L.003      L.0001      L.0002       L.002
          25TH        L.001       L.001       L.001       L.003       L.003      L.0001      L.0002       L.002
   MEDIAN 50TH        L.001       L.001        .004       L.003       L.003      L.0001      L.0002       L.002
          75TH        L.001       L.001        .005        .005        .003*     L.0001      L.0002        .005
          90TH        L.001        .002        .008                    .004      L.0001      L.0002        .014
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  52                      NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                         SURFACE WATER DATA
STATION 00AL05EB2222    LAT. 53D 34M 25S  LONG. 113D 23M 14S   PR 3   UTM 12 341950E 5938500N  FOR MAY 18, 1982 TO NOV 15, 1983
 NORTH SASKATCHEWAN RIVER        CENTRE     BEVERLY RAILWAY TRESTLE
 180M DOWNSTREAM

                             97251F      02065F      08102F      02042F      02041L      10301L      08202L      08301L
                            DEPTH OF   TEMPERATURE   OXYGEN     SPECIFIC    SPECIFIC       PH        OXYGEN      OXYGEN
                            SAMPLING     WATER      DISSOLVED   CONDUCT.    CONDUCT.                BIOCHEM.   TOTAL COD
                                                                                                  DEMAND-BOD
                     SUBM  FROM SURF.                  O2                                             O2          O2
                      ID       M         DEG.C        MG/L      USIE/CM      US/CM     PH UNITS      MG/L        MG/L
SAMPLES(FLAGS)              16(0)       22(0)       22(0)       20(0)       22(0)       22(0)       19(4)       22(2)
           LOW                1.1          1.         6.2         30.        267.         7.7         L.3        L5.0
          HIGH                2.7        24.0        14.5        405.        372.         8.4         3.1        39.3
       AVERAGE                2.0        14.0         9.7        340.        328.                     1.4*       14.8*
      STD.DEV.                 .4         6.5         2.0         80.         25.                      .9*        9.9*
  PERCNT:10TH                 1.5          5.         7.9        305.        293.         8.0         L.3         5.9
          25TH                1.7         8.1         8.5        325.        318.         8.2          .7         7.5
   MEDIAN 50TH                1.9        16.0         8.9        350.        332.         8.2         1.3        12.5
          75TH                2.1         19.        11.2        390.        342.         8.3         1.9         16.
          90TH                2.7        19.5        12.4        398.        360.         8.4         2.7        32.8
SECONDARY CODE                                                                                               04L

                             06536L      06005L      06154L      06107L      06905L      06715L      06721L      10151L
                            PHENOLIC     CARBON      CARBON      CARBON      CARBON     CHLORO -  CHLOROPHYLL  ALKALINITY
                            MATERIAL     TOTAL     DISSOLVED   DISSOLVED  PARTICULATE   PHYLL A      -A-         PHENOL
                             PHENOL     ORGANIC    INORGANIC    ORGANIC     TOTAL                 EPILITHON    PHTHALEIN
                     SUBM                  C           C           C          C                                 CACO3
                      ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/M3       MG/M2        MG/L
SAMPLES(FLAGS)              22(12)      11(0)       10(0)       10(0)       10(0)       10(0)                   22(5)
           LOW               L.002        4.7        29.0          .8         .25         .82                      .0
          HIGH                .005        10.        35.0         7.6        7.34        3.24                    L4.2
       AVERAGE                .002*       7.8        32.3         2.8        1.92        2.04                     1.0*
      STD.DEV.                .001*       1.8         2.3         2.2        2.14         .93                     1.8*
  PERCNT:10TH                L.002         6.        29.0          .9         .34         .97                      .0
          25TH               L.002        6.4        30.0         1.1         .75        1.30                      .0
   MEDIAN 50TH               L.002         8.        32.5         1.9        1.25        1.74                      .0
          75TH                .003        9.5        34.0         4.0        2.40        3.06                      .0
          90TH                .004        9.6        35.0         6.4        5.42        3.20                    L4.2
SECONDARY CODE           37L

                             10101L      06301L      06201L      17203L      16306L      09107L      14102L      10602L
                           ALKALINITY  CARBONATE   BICARBONT.   CHLORIDE    SULPHATE    FLUORIDE     SILICA     HARDNESS
                             TOTAL      (CALCD.)     (CALCD.)   DISSOLVED   DISSOLVED   DISSOLVED   REACTIVE      TOTAL
                                                                                                               (CALCD.)
                     SUBM     CACO3        CO3       HCO3          CL         SO4          F          SIO2        CACO3
                      ID      MG/L        MG/L      MG/L          MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              22(0)       22(5)        22(5)      22(13)      22(0)       22(0)       22(0)       22(0)
           LOW               114.          0.       Q135.         L0.         20.         .11         2.4        110.
          HIGH               147.         Q5.        178.          3.         50.         .18         6.3        171.
       AVERAGE               132.          1.*       158.*        1.5*        36.         .14         4.0        149.
      STD.DEV.                 9.          2.*        12.*         .7*         8.         .02          .9         14.
  PERCNT:10TH                119.          0.        143.         L0.         25.         .12         2.9        134.
          25TH               126.          0.        152.         L0.         31.         .13         3.5        141.
   MEDIAN 50TH               131.          0.        157.        L1.0         37.         .14         3.9        150.
          75TH               137.          0.        167.          2.         40.         .15         4.5        158.
          90TH               146.         Q5.        178.          2.         45.         .17         5.0        167.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  53                          NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                          SURFACE WATER DATA
STATION 00AL05EB2222    LAT. 53D 34M 25S  LONG. 113D 23M 14S   PR 3   UTM 12 341950E 5938500N  FOR MAY 18, 1982 TO NOV 15, 1983
 NORTH SASKATCHEWAN RIVER        CENTRE     BEVERLY RAILWAY TRESTLE
 180M DOWNSTREAM
                          20110L      12102L      11103L      19103L       15406L       15419L       07403L       07602L
                         CALCIUM    MAGNESIUM     SODIUM    POTASSIUM   PHOSPHOROUS   PHOSPHORUS    NITROGEN     NITROGEN
                        DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED      TOTAL        TOTAL      TOTAL ORG.     TOTAL
                                                                        PHOSPHATE    PHOSPHATE     (CALCD.)     (CALCD.)
                  SUBM      CA          MG          NA          K            P            P            N            N
                   ID      MG/L        MG/L        MG/L        MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            22(0)       22(0)       22(0)       22(0)        10(0)        15(0)        12(11)       22(15)
           LOW               31.          8.          2.          .6         .027         .024        Q.100        Q.250
          HIGH               47.         14.          9.         1.9         .161         .188         .200         .960
       AVERAGE               41.         11.3         5.5        1.0         .082         .083         .117*        .556*
      STD.DEV.                4.          1.5         1.9         .3         .047         .052         .039*        .180*
  PERCNT:10TH                37.         10.          4.          .7         .029         .031        Q.100         .280
          25TH               40.         10.          4.          .8         .05          .035         .100         .450
   MEDIAN 50TH               41.         11.0         5.0         .9         .068         .064         .100         .550
          75TH               42.         12.          7.         1.1         .13          .125         .100        Q.650
          90TH               46.         13.          9.         1.3         .148         .176        Q.200        Q.770
SECONDARY CODE                                                                           21L
                          07021L      07503L      07562L      07205L       07206L       07105L       07906L       10407L
                         NITROGEN    NITROGEN    NITROGEN    NITROGEN     NITROGEN     NITROGEN     NITROGEN     RESIDUE
                          TOTAL       TOTAL     DISSOLVED   DISSOLVED    DISSOLVED    DISSOLVED   PARTICULATE NONFILTRABLE
                         KJELDAHL    AMMONIA     AMMONIA     NITRITE      NITRITE     NO3 & NO2      TOTAL
                  SUBM      N           N           N           N            N            N            N
                   ID      MG/L        MG/L        MG/L        MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            22(6)       12(11)      15(1)       22(21)       12(11)       22(14)       10(3)        15(0)
           LOW              .190        L.4        L.002        L.05        L.007         L.05         L.01           6.
          HIGH              .720         .5         .500         .06         .021          .40          .33         161.
       AVERAGE              .405*        .41*       .122*        .050*       .008*         .097*        .099*         29.
      STD.DEV.              .167*        .03*       .134*        .002*       .004*         .093*        .104*         40.
  PERCNT:10TH               .200        L.4         .031        L.05        L.007         L.05        L.010           6.
          25TH              .270        L.40        .051        L.05        L.007         L.05        L.01            9.
   MEDIAN 50TH              .415        L.40        .059        L.050       L.007         L.050        .060          13.
          75TH             L.5          L.40        .126        L.05        L.007          .10          .13          39.
          90TH              .600        L.4         .360        L.05        L.007          .25          .270         53.
SECONDARY CODE            01L
                          10474L      10453L      00205L      36001L       36011L       36102L       36910L       29009L
                         RESIDUE     RESIDUE       TOTAL    COLIFORMS    COLIFORMS      STREP.     STD. PLATE     COPPER
                          TOTAL     FILTRABLE   DISSOLVED     TOTAL        FECAL        FECAL        COUNT         TOTAL
                                                  SOLIDS                                           BACT.DENS.
                                                               MPN          MPN           MF                       CU
                  SUBM
                   ID      MG/L        MG/L        MG/L      NO/100ML     NO/100ML     NO/100ML      NO/ML         MG/L
SAMPLES(FLAGS)            15(0)       15(0)       22(0)       22(0)        22(0)        22(0)        21(0)        22(10)
           LOW              206.        200.        133.        510.          30.          20.          29.        L.001
          HIGH              411.        310.        207.      66000.       33000.        1400.       22000.         .008
       AVERAGE              287.        259.        176.      10546.        2915.         290.        3879.         .003*
      STD.DEV.               49.         30.         16.      15026.        7398.         325.        5640.         .002*
  PERCNT:10TH               223.        210.        160.       1300.         180.          50.         300.        L.001
          25TH              255.        240.        165.       2800.         340.          90.         380.        L.001
   MEDIAN 50TH              289.        260.        179.       5150.         580.         165.        1100.         .002
          75TH              316.        280.        185.      11000.        1700.         350.        3900.         .004
          90TH              323.        290.        191.      17000.        2500.         610.       10000.         .006
SECONDARY CODE                                              02L          12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  54                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                      SURFACE WATER DATA
STATION 00AL05EB2222    LAT. 53D 34M 25S  LONG. 113D 23M 14S   PR 3   UTM 12 341950E 5938500N  FOR MAY 18, 1982 TO NOV 15, 1983
 NORTH SASKATCHEWAN RIVER        CENTRE      BEVERLY RAILWAY TRESTLE
 180M DOWNSTREAM

                          30009L      26304L      13306L      25003L      28009L      42009L      27009L      33005L
                           ZINC        IRON      ALUMINUM   MANGANESE     NICKEL    MOLYBDENUM    COBALT     ARSENIC
                          TOTAL      EXTRBLE.    EXTRBLE.     TOTAL       TOTAL       TOTAL       TOTAL      TOTAL

                   SUBM     ZN          FE          AL          MN          NI          MO          CO          AS
                    ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            22(1)       22(0)       18(0)       19(3)       22(3)       18(16)      22(17)      14(3)
           LOW             L.001         .05        .045       L.008       L.001       L.001       L.001      L.0002
          HIGH              .045        1.58       4.080        .114        .015        .006        .004       .0022
       AVERAGE              .019*        .40        .683        .028*       .005*       .001*       .001*      .0006*
      STD.DEV.              .013*        .40       1.171        .030*       .003*       .001*       .001*      .0005*
  PERCNT:10TH               .004         .07        .050       L.008       L.001       L.001       L.001      L.0002
          25TH              .006         .13        .090        .009        .003       L.001       L.001       .0003
    MEDIAN 50TH             .018         .22        .190        .015        .006       L.001       L.001       .0004
          75TH              .029         .52        .459        .042        .007       L.001       L.001       .0008
          90TH              .036        1.02       3.430        .089        .008        .004        .003       .0009
SECONDARY CODE

                          04304L      48009L      24009L      82302L      82009L      80015L      34005L      23009L
                        BERYLLIUM    CADMIUM    CHROMIUM       LEAD        LEAD      MERCURY    SELENIUM    VANADIUM
                         EXTRBLE.     TOTAL       TOTAL      EXTRBLE.      TOTAL       TOTAL     TOTAL        TOTAL

                   SUBM     BE          CD          CR          PB          PB          HG          SE          V
                    ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            18(18)      22(17)      22(4)       7(5)        12(5)       10(10)      14(13)      17(8)
           LOW             L.001       L.001       L.001       L.003       L.003      L.0001      L.0002       L.002
          HIGH             L.001        .004        .013        .005        .040      L.0001       .0003        .015
       AVERAGE                          .001*       .005*       .003*       .009*                  .0002*       .004*
      STD.DEV.                          .001*       .003*       .001*       .011*                  .0000*       .004*
  PERCNT:10TH              L.001       L.001       L.001                   L.003      L.0001      L.0002       L.002
          25TH             L.001       L.001        .003       L.003       L.003      L.0001      L.0002       L.002
    MEDIAN 50TH            L.001       L.001        .005       L.003        .004      L.0001      L.0002        .003
          75TH             L.001       L.001        .007        .004        .008      L.0001      L.0002        .004
          90TH             L.001        .003        .008                    .020      L.0001      L.0002        .011
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  55                   NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                     SURFACE WATER DATA
STATION 00AL05EB2223    LAT. 53D 34M 25S  LONG. 113D 23M 11S   PR 3   UTM 12 342000E 5938500N  FOR MAY 18, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     BEVERLY RAILWAY TRESTLE
 180M DOWNSTREAM

                    97251F        02065F        08102F        02042F        02041L        10301L        08202L        08301L
                   DEPTH OF    TEMPERATURE      OXYGEN       SPECIFIC      SPECIFIC        PH          OXYGEN        OXYGEN
                   SAMPLING       WATER       DISSOLVED      CONDUCT.      CONDUCT.                   BIOCHEM.     TOTAL COD
                                                                                                     DEMAND-BOD
               SUBM  FROM SURF.                   O2                                                     O2            O2
                ID       M          DEG.C        MG/L         USIE/CM        US/CM      PH UNITS        MG/L          MG/L
SAMPLES(FLAGS)         19(0)        23(0)        23(0)         21(0)         24(0)        23(0)        22(3)         23(2)
           LOW            .3           .6          5.6            4.          278.          6.7          L.3          L5.0
          HIGH           2.1         24.5         14.8          450.          427.          8.4          4.9          28.0
       AVERAGE            .8         13.8         10.0          377.          367.                       2.3*         13.1*
      STD.DEV.            .4          6.7          2.2           95.           33.                       1.4*          6.5*
   PERCNT:10TH            .5          2.0          8.3          330.          324.          7.8           .6           5.6
          25TH            .6          8.5          8.4          355.          352.          7.9          1.0           7.9
   MEDIAN 50TH            .6          16.          9.4          390.          379.          8.1          2.2           14.
          75TH            .9          19.         11.5          440.          389.          8.2          3.6           15.
          90TH           1.5          20.          13.          450.          392.          8.4          4.2           23.
SECONDARY CODE                                                                                                     04L

                    06536L        06005L        06154L        06107L        06905L        06715L        06721L        10151L
                   PHENOLIC       CARBON        CARBON        CARBON        CARBON      CHLORO -    CHLOROPHYLL   ALKALINITY
                   MATERIAL       TOTAL       DISSOLVED     DISSOLVED    PARTICULATE    PHYLL A         -A-          PHENOL
                    PHENOL       ORGANIC      INORGANIC      ORGANIC        TOTAL                    EPILITHON     PHTHALEIN
               SUBM                  C            C             C             C                                    CACO3
                ID   MG/L          MG/L         MG/L          MG/L          MG/L         MG/M3         MG/M2         MG/L
SAMPLES(FLAGS)         23(8)        10(0)        12(0)         12(0)         12(2)        10(0)         9(0)         22(3)
           LOW         L.002          7.5         29.0           1.1          L.01         1.50       26.310            .0
          HIGH          .012          11.         36.0           8.0          7.89         8.68       376.73          L4.2
       AVERAGE          .004*         9.4         33.0           2.7          1.71*        4.36       94.928            .6*
      STD.DEV.          .002*         1.6          2.3           2.1          2.33*        2.52      109.583           1.5*
   PERCNT:10TH         L.002          7.6         30.0           1.2          L.01         1.75                         .0
          25TH         L.002          7.8         31.0           1.4           .52         2.21       36.784            .0
   MEDIAN 50TH          .003          9.5         33.5           1.7           .80         3.75       72.632            .0
          75TH          .004          11.         35.0           3.5          1.56         6.72        80.55            .0
          90TH          .006         11.0         35.0           5.7          4.87         8.03                       L4.2
SECONDARY CODE       37L

                    10101L        06301L        06201L        17203L        16306L        09107L        14102L        10602L
                  ALKALINITY    CARBONATE    BICARBONT.     CHLORIDE      SULPHATE      FLUORIDE       SILICA       HARDNESS
                    TOTAL        (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED     DISSOLVED     REACTIVE        TOTAL
                                                                                                                   (CALCD.)
               SUBM  CACO3          CO3          HCO3           CL           SO4            F           SIO2          CACO3
                ID   MG/L          MG/L        MG/L            MG/L          MG/L          MG/L         MG/L          MG/L
SAMPLES(FLAGS)         24(0)        22(3)        22(3)         24(2)         24(0)        24(0)        24(0)         24(0)
           LOW          115.           0.         140.           L0.           20.          .13          2.7          123.
          HIGH          151.          Q5.         184.           14.           60.          .28          6.7          178.
       AVERAGE          134.           1.*        161.*          5.3*          43.          .19          4.2          155.
      STD.DEV.           10.           2.*         13.*          3.2*           9.          .03           .9           14.
   PERCNT:10TH          120.           0.        Q146.            2.           35.          .15          2.8          139.
          25TH          127.           0.         151.           3.0           39.          .17          3.7          148.
   MEDIAN 50TH          134.           0.         162.           5.0           45.          .18          4.1          152.
          75TH          140.           0.         171.           7.0           48.          .21          4.5          168.
          90TH          148.          Q5.         180.           10.           55.          .22          5.1          174.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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                                                                                         SURFACE WATER DATA
STATION 00AL05EB2223    LAT. 53D 34M 25S  LONG. 113D 23M 11S   PR 3   UTM 12 342000E 5938500N  FOR MAY 18, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     BEVERLY RAILWAY TRESTLE
 180M DOWNSTREAM

                             20110L       12102L       11103L       19103L       15406L       15419L       07403L       07602L
                             CALCIUM     MAGNESIUM     SODIUM     POTASSIUM   PHOSPHOROUS  PHOSPHORUS    NITROGEN     NITROGEN
                            DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL        TOTAL     TOTAL ORG.      TOTAL
                                                                              PHOSPHATE    PHOSPHATE     (CALCD.)     (CALCD.)
                     SUBM      CA           MG           NA           K            P            P            N            N
                      ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
      SAMPLES(FLAGS)         24(0)        24(0)        24(0)        24(0)        10(0)        17(0)        11(3)        23(3)
                 LOW                36.           8.           3.           .7         .077         .023        Q.100         .550
                HIGH                53.          15.          15.          2.3         .424         .480         .800        1.940
             AVERAGE                43.         11.7         10.3          1.4         .242         .231         .382*       1.189*
            STD.DEV.                 4.          1.4          2.9           .3         .128         .122         .223*        .394*
         PERCNT:10TH                38.          10.           6.          1.0         .087         .050         .200         .600
                25TH                40.         11.0          8.0          1.2          .13         .151         .200         .850
         MEDIAN 50TH                42.         12.0         11.0          1.3         .259         .250         .300        1.250
                75TH                46.         12.0         12.0          1.5         .334         .310         .500        1.530
                90TH                47.         13.0          13.          1.8         .422         .380         .700        1.580
      SECONDARY CODE                                                                                21L

                             07021L       07503L       07562L       07205L       07206L       07105L       07906L       10407L
                            NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN      RESIDUE
                              TOTAL        TOTAL      DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED   PARTICULATE NONFILTRABLE
                            KJELDAHL      AMMONIA      AMMONIA      NITRITE      NITRITE     NO3 & NO2      TOTAL
                     SUBM       N            N            N            N            N            N            N
                      ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
      SAMPLES(FLAGS)         23(0)        11(3)        17(0)        24(18)       11(2)        24(3)        12(3)        17(0)
                 LOW               .320          L.4         .031         L.05        L.007         L.05         L.01           5.
                HIGH              1.440           .9        1.130          .39         .048         1.06          .42         216.
             AVERAGE               .954          .60*        .601         .071*        .025*        .229*        .117*         32.
            STD.DEV.               .315          .17*        .370         .070*        .017*        .232*        .136*         53.
         PERCNT:10TH                 .5          L.4         .045         L.05        L.007         L.05         L.01           7.
                25TH               .810          L.4         .300        L.050         .007         .090         .010*         10.
         MEDIAN 50TH               .940           .6         .672        L.050         .029         .150         .075          11.
                75TH              1.240           .7         .870         .055*         .04         .275         .170          24.
                90TH              1.360           .8        1.120          .10         .046          .50          .33         109.
      SECONDARY CODE        01L

                             10474L       10453L       00205L       36001L       36011L       36102L       36910L       29009L
                             RESIDUE      RESIDUE       TOTAL      COLIFORMS    COLIFORMS     STREP.     STD. PLATE     COPPER
                              TOTAL      FILTRABLE    DISSOLVED      TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                       SOLIDS                                           BACT.DENS.
                     SUBM                                            MPN          MPN          MF                        CU
                      ID      MG/L         MG/L         MG/L       NO/100ML     NO/100ML     NO/100ML      NO/ML        MG/L
      SAMPLES(FLAGS)         17(0)        17(0)        24(0)        21(0)        21(0)        21(0)        20(0)        24(9)
                 LOW               204.         190.         144.        2400.         320.          20.          31.        L.001
                HIGH               536.         360.         226.       94000.       30000.        2200.       30000.         .008
             AVERAGE               294.         268.         195.       21129.        4726.         470.        6687.         .003*
            STD.DEV.                77.          43.          18.       20439.        8231.         489.        7191.         .002*
         PERCNT:10TH               227.         220.         177.        7400.         830.          40.        1450.        L.001
                25TH               251.         230.         185.       10000.         990.         170.        1700.        L.001
         MEDIAN 50TH               281.         270.         196.       15000.        1900.         440.        4000.         .002
                75TH               318.         290.         208.       22000.        2900.         620.        9200.         .003
                90TH               376.         320.         214.       38000.        7000.         800.       15000.         .006
      SECONDARY CODE                                                  02L          12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  57                       NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                       SURFACE WATER DATA
STATION 00AL05EB2223    LAT. 53D 34M 25S  LONG. 113D 23M 11S   PR 3   UTM 12 342000E 5938500N  FOR MAY 18, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     BEVERLY RAILWAY TRESTLE
 180M DOWNSTREAM
                           30009L     26304L     13306L     25003L     28009L     42009L     27009L     33005L
                            ZINC       IRON     ALUMINUM   MANGANESE   NICKEL   MOLYBDENUM   COBALT    ARSENIC
                           TOTAL     EXTRBLE.   EXTRBLE.    TOTAL      TOTAL      TOTAL      TOTAL      TOTAL

                   SUBM     ZN         FE         AL         MN         NI         MO         CO         AS
                    ID     MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)             24(0)      24(0)      20(0)      21(0)      24(0)      20(19)     24(21)     17(2)
           LOW              .004        .03       .050       .011       .003      L.001      L.001     L.0002
          HIGH              .065       1.70      4.200       .119       .012       .004       .004      .0018
       AVERAGE              .020        .39       .631       .031       .006       .001*      .001*     .0007*
      STD.DEV.              .016        .45      1.121       .032       .002       .001*      .001*     .0004*
   PERCNT:10TH              .005        .09       .071       .012       .004      L.001      L.001     L.0002
          25TH              .008        .12       .098       .014       .004      L.001      L.001      .0005
    MEDIAN 50TH             .014        .21       .171       .015       .006      L.001      L.001      .0007
          75TH              .033        .45       .423       .024       .008      L.001      L.001      .0007
          90TH              .043       1.26      2.395       .086       .008      L.001       .002      .0009
SECONDARY CODE
                           04304L     48009L     24009L     82302L     82009L     80015L     34005L     23009L
                          BERYLLIUM   CADMIUM   CHROMIUM     LEAD       LEAD     MERCURY   SELENIUM   VANADIUM
                           EXTRBLE.    TOTAL      TOTAL     EXTRBLE.    TOTAL      TOTAL     TOTAL      TOTAL

                   SUBM     BE         CD         CR         PB         PB         HG         SE         V
                    ID     MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)             20(20)     24(21)     24(2)      10(7)      12(6)      12(12)     17(12)     19(10)
           LOW             L.001      L.001      L.001      L.003      L.003     L.0001     L.0002      L.002
          HIGH             L.001       .002       .057       .007       .084     L.0001      .0007       .015
       AVERAGE                         .001*      .009*      .004*      .011*                .0003*      .004*
      STD.DEV.                         .000*      .011*      .001*      .023*                .0001*      .003*
   PERCNT:10TH             L.001      L.001       .003      L.003      L.003     L.0001     L.0002      L.002
          25TH             L.001      L.001       .005      L.003      L.003     L.0001     L.0002      L.002
    MEDIAN 50TH            L.001      L.001       .006      L.003       .003*    L.0001     L.0002      L.002
          75TH             L.001      L.001       .011       .004       .006     L.0001      .0003       .004
          90TH             L.001       .002       .017       .007       .008     L.0001      .0003       .010
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE   1                        NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                        SURFACE WATER DATA
STATION 00AL05EB2301    LAT. 53D 36M 33S  LONG. 113D 20M 36S   PR 3   UTM 12 344950E 5942350N  FOR MAY 18, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER      LEFT BANK     DOWNSTREAM OF CLOVERBAR POWER PLANT
 NEAR POWER TRANSMISSION LINES

                          97251F      02065F      08102F      02042F      02041L      10301L      08202L      08301L
                         DEPTH OF   TEMPERATURE   OXYGEN     SPECIFIC    SPECIFIC       PH        OXYGEN      OXYGEN
                         SAMPLING      WATER     DISSOLVED   CONDUCT.    CONDUCT.                BIOCHEM.   TOTAL COD
                                                                                               DEMAND-BOD
                  SUBM  FROM SURF.                  O2                                             O2          O2
                   ID       M         DEG.C        MG/L       USIE/CM      US/CM     PH UNITS     MG/L        MG/L
SAMPLES(FLAGS)            12(0)       12(0)       12(0)       12(0)       12(0)       12(0)      13(2)       11(0)
           LOW               .8          1.          7.9        280.        264.         8.1        L.3          7.9
          HIGH              2.4        20.5        15.          410.        354.         8.6        4.          25.
       AVERAGE              1.5        14.4        10.2         353.        321.                    1.4*        13.2
      STD.DEV.               .5         6.3         2.2          41.         26.                    1.1*         5.0
  PERCNT:10TH                .9         5.          8.4         310.        293.         8.2        L.3          8.
          25TH              1.2        11.0         8.6         320.        306.         8.3         .6          8.4
   MEDIAN 50TH              1.5        16.3         9.4         360.        325.         8.4         .9         12.
          75TH              1.9        19.0        11.7         388.        340.         8.4        2.2         15.
          90TH              2.3        19.5        12.8         395.        348.         8.4        2.5         18.
SECONDARY CODE

                          06536L      06005L      06154L      06107L      06905L      06715L      06721L      10151L
                         PHENOLIC     CARBON      CARBON      CARBON      CARBON     CHLORO -  CHLOROPHYLL  ALKALINITY
                         MATERIAL     TOTAL     DISSOLVED   DISSOLVED  PARTICULATE   PHYLL A       -A-        PHENOL
                          PHENOL     ORGANIC    INORGANIC    ORGANIC      TOTAL                 EPILITHON   PHTHALEIN
                  SUBM                  C           C           C           C                               CACO3
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/M3       MG/M2       MG/L
SAMPLES(FLAGS)            13(8)       11(0)                                                                 12(7)
           LOW            L.002         3.2                                                                    .0
          HIGH             .004        11.                                                                   L4.2
       AVERAGE             .002*        7.6                                                                   2.4*
      STD.DEV.             .001*        2.4                                                                   2.2*
  PERCNT:10TH             L.002         5.                                                                     .0
          25TH            L.002         6.                                                                     .0
   MEDIAN 50TH            L.002         8.                                                                   L4.2
          75TH             .002         9.7                                                                  L4.2
          90TH             .004        11.                                                                   L4.2
SECONDARY CODE

                          10101L      06301L      06201L      17203L      16306L      09107L      14102L      10602L
                        ALKALINITY   CARBONATE   BICARBONT.   CHLORIDE    SULPHATE    FLUORIDE     SILICA     HARDNESS
                          TOTAL       (CALCD.)    (CALCD.)   DISSOLVED   DISSOLVED   DISSOLVED    REACTIVE      TOTAL
                                                                                                             (CALCD.)
                  SUBM     CACO3        CO3       HCO3          CL          SO4          F          SIO2        CACO3
                   ID      MG/L        MG/L       MG/L         MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            12(0)       12(7)       12(7)       12(12)      12(0)       12(0)       12(0)       12(0)
           LOW             113.          0.       Q128.         L0.         20.         .12         3.0        110.
          HIGH             149.         Q5.        179.         L0.         45.         .15         5.4        168.
       AVERAGE             133.          3.*       156.*                    32.         .13         4.2        147.
      STD.DEV.              11.          3.*        15.*                     8.         .01          .7         15.
  PERCNT:10TH              117.          0.       Q132.         L0.         20.         .12         3.5        136.
          25TH             129.          0.        152.         L1.0        28.         .12         3.7        140.
   MEDIAN 50TH             133.          5.        157.         L1.0        34.         .13         4.1        150.
          75TH             142.          5.        167.         L1.0        38.         .14         4.5        156.
          90TH             147.         Q5.       Q171.         L0.         40.         .14         5.0        158.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE   2                       NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                          SURFACE WATER DATA
STATION 00AL05EB2301    LAT. 53D 36M 33S  LONG. 113D 20M 36S   PR 3   UTM 12 344950E 5942350N  FOR MAY 18, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER     LEFT BANK     DOWNSTREAM OF CLOVERBAR POWER PLANT
 NEAR POWER TRANSMISSION LINES

                            20110L      12102L      11103L      19103L      15406L      15419L      07403L      07602L
                           CALCIUM    MAGNESIUM     SODIUM    POTASSIUM  PHOSPHOROUS  PHOSPHORUS   NITROGEN    NITROGEN
                          DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED     TOTAL       TOTAL     TOTAL ORG.    TOTAL
                                                                          PHOSPHATE   PHOSPHATE    (CALCD.)    (CALCD.)
                     SUBM     CA          MG          NA          K           P           P           N           N
                      ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)               12(0)       12(0)       12(0)       12(0)        9(0)        5(0)      12(12)      12(12)
           LOW                 31.          8.          2.          .5        .016        .012       Q.100       Q.270
          HIGH                 49.         13.          6.         1.1        .165        .025       Q.300       Q.750
       AVERAGE                 41.        10.8         4.8          .9        .057        .021
      STD.DEV.                  4.         1.3         1.1          .1        .058        .006
   PERCNT:10TH                 38.         10.          4.          .8                               Q.100       Q.550
          25TH                 40.        10.0         4.0          .8         .02        .021        .100        .550
   MEDIAN 50TH                 42.        11.0         5.0          .9        .023        .024        .100        .550
          75TH                 43.        11.5         5.5          .9        .093        .025        .100        .550
          90TH                 46.         12.          6.         1.0                               Q.200       Q.570
SECONDARY CODE                                                                             21L

                            07021L      07503L      07562L      07205L      07206L      07105L      07906L      10407L
                           NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN     RESIDUE
                            TOTAL       TOTAL     DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED  PARTICULATE NONFILTRABLE
                           KJELDAHL    AMMONIA     AMMONIA     NITRITE     NITRITE    NO3 & NO2     TOTAL
                     SUBM     N           N           N           N           N           N           N
                      ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)               13(6)      13(12)        5(0)      12(12)      13(13)      12(11)                    5(0)
           LOW                .140        L.4         .007        L.05       L.007        L.05                      8.
          HIGH                  .7         .4         .029        L.05       L.007         .07                     21.
       AVERAGE               .400*       .40*         .017                               .052*                    13.
      STD.DEV.               .191*       .00*         .010                               .006*                     5.
   PERCNT:10TH                .150        L.4                     L.05       L.007        L.05
          25TH                .210        L.4         .008       L.050       L.007       L.050                      9.
   MEDIAN 50TH                 L.5        L.4         .020       L.050       L.007       L.050                     14.
          75TH                 L.5        L.4         .023       L.050       L.007       L.050                     15.
          90TH                  .6        L.4                     L.05       L.007        L.05
SECONDARY CODE               01L

                            10474L      10453L      00205L      36001L      36011L      36102L      36910L      29009L
                           RESIDUE     RESIDUE      TOTAL     COLIFORMS   COLIFORMS     STREP.   STD. PLATE    COPPER
                            TOTAL     FILTRABLE   DISSOLVED     TOTAL       FECAL       FECAL       COUNT       TOTAL
                                                   SOLIDS                                        BACT.DENS.
                     SUBM                                       MPN         MPN          MF                     CU
                      ID     MG/L        MG/L        MG/L     NO/100ML    NO/100ML    NO/100ML     NO/ML        MG/L
SAMPLES(FLAGS)                5(0)        5(0)       12(0)       11(0)       11(0)       11(0)       11(0)       12(4)
           LOW                174.        160.        133.        300.         30.         30.         27.       L.001
          HIGH                299.        290.        193.      10000.        670.        290.       7200.        .006
       AVERAGE                244.        230.        171.       2080.        217.        141.       1041.       .003*
      STD.DEV.                 56.         57.         17.       2773.        179.         88.       2075.       .002*
   PERCNT:10TH                                        153.        680.         70.         40.         49.       L.001
          25TH                195.        180.        162.        800.        130.         46.        160.       L.001
   MEDIAN 50TH                259.        250.        174.       1100.        160.        140.        330.        .002
          75TH                291.        270.        182.       1800.        280.        230.        990.        .004
          90TH                                        188.       3700.        390.        250.       1000.        .006
SECONDARY CODE                                                 02L         12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE   3                     NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                     SURFACE WATER DATA
STATION 00AL05EB2301    LAT. 53D 36M 33S  LONG. 113D 20M 36S   PR 3   UTM 12 344950E 5942350N  FOR MAY 18, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER     LEFT BANK     DOWNSTREAM OF CLOVERBAR POWER PLANT
 NEAR POWER TRANSMISSION LINES

                        30009L       26304L       13306L       25003L       28009L       42009L       27009L       33005L
                         ZINC         IRON       ALUMINUM     MANGANESE     NICKEL     MOLYBDENUM     COBALT       ARSENIC
                        TOTAL       EXTRBLE.     EXTRBLE.      TOTAL        TOTAL        TOTAL        TOTAL       TOTAL

               SUBM      ZN           FE           AL           MN           NI           MO           CO           AS
                ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          12(1)        12(1)        8(0)         9(1)         12(1)        8(8)         12(11)       7(2)
           LOW           L.001        L.02         .203         .009        L.001        L.001        L.001       L.0002
          HIGH            .050        1.21        2.860         .110         .010        L.001         .002        .0007
       AVERAGE            .034*        .35*        .893         .031*        .005*                     .001*       .0004*
      STD.DEV.            .014*        .33*        .935         .032*        .002*                     .000*       .0002*
   PERCNT:10TH            .015         .11                                   .003                     L.001
          25TH            .030         .12         .399         .012         .005        L.001        L.001       L.0002
   MEDIAN 50TH            .036         .23         .457         .016         .005        L.001        L.001        .0004
          75TH            .042         .45        1.185         .042         .006        L.001        L.001        .0005
          90TH            .048         .63                                   .007                     L.001
SECONDARY CODE

                        04304L       48009L       24009L       82302L       82009L       80015L       34005L       23009L
                       BERYLLIUM     CADMIUM     CHROMIUM       LEAD         LEAD        MERCURY     SELENIUM     VANADIUM
                        EXTRBLE.      TOTAL        TOTAL       EXTRBLE.      TOTAL        TOTAL       TOTAL        TOTAL

               SUBM      BE           CD           CR           PB           PB           HG           SE           V
                ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          8(8)         12(10)       12(2)                     12(7)                     7(5)         8(4)
           LOW          L.001        L.001        L.001                     L.003                     L.0002       L.002
          HIGH          L.001         .004         .013                      .016                      .0007        .010
       AVERAGE                        .001*        .005*                     .005*                     .0003*       .003*
      STD.DEV.                        .001*        .003*                     .004*                     .0002*       .003*
   PERCNT:10TH                       L.001        L.001                     L.003
          25TH          L.001        L.001         .004                     L.003                     L.0002       L.002
   MEDIAN 50TH          L.001        L.001         .005                     L.003                     L.0002        .002*
          75TH          L.001        L.001         .007                      .005                      .0003        .004
          90TH                        .002         .009                      .007
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE   4                  NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                   SURFACE WATER DATA
STATION 00AL05EB2302    LAT. 53D 36M 30S  LONG. 113D 20M 39S   PR 3   UTM 12 344900E 5942300N  FOR MAY 18, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER       CENTRE     DOWNSTREAM OF CLOVERBAR POWER PLANT
 NEAR POWER TRANSMISSION LINES

                       97251F      02065F      08102F      02042F      02041L      10301L      08202L      08301L
                      DEPTH OF   TEMPERATURE   OXYGEN     SPECIFIC    SPECIFIC       PH        OXYGEN      OXYGEN
                      SAMPLING      WATER     DISSOLVED   CONDUCT.    CONDUCT.                BIOCHEM.   TOTAL COD
                                                                                            DEMAND-BOD
                 SUBM  FROM SURF.                02                                             O2          O2
                  ID       M          DEG.C      MG/L       USIE/CM      US/CM     PH UNITS     MG/L        MG/L
SAMPLES(FLAGS)           12(0)       12(0)      12(0)       11(0)       12(0)       12(0)       12(2)       12(0)
           LOW              .9          1.         7.7        300.        267.         8.0         L.3         6.1
          HIGH             2.1        20.5        14.7        410.        352.         8.4         2.9         44.
       AVERAGE             1.5        14.4        10.0        358.        323.                     1.3*       16.7
      STD.DEV.              .5         6.3         2.1         38.         25.                     1.0*       10.1
   PERCNT:10TH              .9          5.         8.3        320.        297.         8.1         L.3         8.9
          25TH             1.0        11.3         8.4        320.        309.         8.1          .4        11.0
   MEDIAN 50TH             1.5        16.3         9.2        350.        328.         8.2         1.1        13.5
          75TH             1.9        19.0        11.5        390.        341.         8.3         2.2        19.5
          90TH             2.1         19.        12.7        400.        348.         8.4         2.7         26.
SECONDARY CODE

                       06536L      06005L      06154L      06107L      06905L      06715L      06721L      10151L
                      PHENOLIC     CARBON      CARBON      CARBON      CARBON     CHLORO -  CHLOROPHYLL  ALKALINITY
                      MATERIAL     TOTAL      DISSOLVED   DISSOLVED  PARTICULATE  PHYLL A       -A-        PHENOL
                       PHENOL     ORGANIC    INORGANIC    ORGANIC      TOTAL                 EPILITHON   PHTHALEIN
                 SUBM                C           C           C           C                                 CACO3
                  ID     MG/L       MG/L        MG/L        MG/L        MG/L       MG/M3       MG/M2        MG/L
SAMPLES(FLAGS)           12(6)      11(0)                                                                 12(3)
           LOW          L.002         5.7                                                                   .0
          HIGH           .004        12.4                                                                 L4.2
       AVERAGE           .002*        8.4                                                                  1.0*
      STD.DEV.           .001*        2.3                                                                  1.9*
   PERCNT:10TH          L.002         5.8                                                                   .0
          25TH          L.002          6.                                                                   .0
   MEDIAN 50TH           .002*         8.                                                                   .0
          75TH           .002         11.                                                                  2.1*
          90TH           .003         11.                                                                 L4.2
SECONDARY CODE

                       10101L      06301L      06201L      17203L      16306L      09107L      14102L      10602L
                     ALKALINITY  CARBONATE   BICARBONT.   CHLORIDE    SULPHATE    FLUORIDE     SILICA     HARDNESS
                        TOTAL     (CALCD.)    (CALCD.)   DISSOLVED   DISSOLVED   DISSOLVED   REACTIVE      TOTAL
                                                                                                          (CALCD.)
                 SUBM   CACO3        CO3        HCO3         CL         SO4          F          SIO2        CACO3
                  ID    MG/L        MG/L       MG/L         MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)          12(0)       12(3)       12(3)       12(9)       12(0)       12(0)       12(0)       12(0)
           LOW           114.          0.        139.         L0.         20.         .12         3.2        115.
          HIGH           148.         Q5.        180.          3.         40.         .15         5.6        171.
       AVERAGE           133.          1.*       160.*        1.3*        32.         .14         4.2        147.
      STD.DEV.            11.          2.*        14.*         .7*         7.         .01          .6         15.
   PERCNT:10TH           117.          0.        143.         L0.         20.         .13         3.5        136.
          25TH           128.          0.        152.        L1.0         28.         .13         3.8        137.
   MEDIAN 50TH           133.          0.        157.        L1.0         32.         .13         4.1        146.
          75TH           142.          3.        172.         1.5*        40.         .15         4.5        158.
          90TH           146.         Q5.        178.          2.         40.         .15         5.0        160.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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NAQUADAT SUMMARY REPORT APR 30, 1986
SURFACE WATER DATA
STATION 00AL05EB2302 LAT. 53D 36M 30S LONG. 113D 20M 39S PR 3 UTM 12 344900E 5942300N FOR MAY 18, 1982 TO NOV 02, 1982
NORTH SASKATCHEWAN RIVER CENTRE DOWNSTREAM OF CLOVERBAR POWER PLANT
NEAR POWER TRANSMISSION LINES

	20110L CALCIUM DISSOLVED	12102L MAGNESIUM DISSOLVED	11103L SODIUM DISSOLVED	19103L POTASSIUM DISSOLVED	15406L PHOSPHOROUS TOTAL PHOSPHATE	15419L PHOSPHORUS TOTAL PHOSPHATE	07403L NITROGEN TOTAL ORG. (CALCD.)	07602L NITROGEN TOTAL (CALCD.)
SUBM	CA	MG	NA	K	P	P	N	N
ID	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
SAMPLES(FLAGS)	12(0)	12(0)	12(0)	12(0)	8(0)	5(0)	12(12)	12(12)
LOW	33.	8.	2.	.6	.027	.039	Q.100	Q.550
HIGH	47.	14.	7.	8.0	.155	.106	Q.200	Q.650
AVERAGE	41.	10.8	5.1	1.5	.066	.065		
STD.DEV.	4.	1.6	1.5	2.0	.040	.026		
PERCNT:10TH	38.	10.	4.	.8			Q.100	Q.550
25TH	39.	10.0	4.0	.9	.039	.046	.100	.550
MEDIAN 50TH	41.	10.5	5.5	1.0	.057	.064	.100	.550
75TH	43.	11.5	6.0	1.0	.076	.072	.100	.610
90TH	46.	13.	7.	1.2			Q.200	Q.650
SECONDARY CODE						21L		

	07021L NITROGEN TOTAL KJELDAHL	07503L NITROGEN TOTAL AMMONIA	07562L NITROGEN DISSOLVED AMMONIA	07205L NITROGEN DISSOLVED NITRITE	07206L NITROGEN DISSOLVED NITRITE	07105L NITROGEN DISSOLVED NO3 & NO2	07906L NITROGEN PARTICULATE TOTAL	10407L RESIDUE NONFILTRABLE
SUBM	N	N	N	N	N	N	N	
ID	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
SAMPLES(FLAGS)	12(5)	12(12)	5(0)	12(12)	12(8)	12(9)		5(0)
LOW	.280	L.4	.066	L.05	L.007	L.05		6.
HIGH	.6	L.4	.360	L.05	.010	.12		17.
AVERAGE	.443*		.156		.007*	.062*		12.
STD.DEV.	.103*		.117		.001*	.024*		4.
PERCNT:10TH	.290	L.4		L.05	L.007	L.05		
25TH	.350	L.40	.101	L.050	L.007	L.050		11.
MEDIAN 50TH	L.500	L.40	.112	L.050	L.007	L.050		12.
75TH	L.500	L.40	.143	L.050	.008	.065*		12.
90TH	.5	L.4		L.05	.009	.10		
SECONDARY CODE	01L							

	10474L RESIDUE TOTAL	10453L RESIDUE FILTRABLE	00205L TOTAL DISSOLVED SOLIDS	36001L COLIFORMS TOTAL	36011L COLIFORMS FECAL	36102L STREP. FECAL	36910L STD. PLATE COUNT BACT.DENS.	29009L COPPER TOTAL
SUBM				MPN	MPN	MF		CU
ID	MG/L	MG/L	MG/L	NO/100ML	NO/100ML	NO/100ML	NO/ML	MG/L
SAMPLES(FLAGS)	5(0)	5(0)	12(0)	12(0)	12(0)	12(0)	10(0)	12(3)
LOW	212.	200.	134.	1400.	140.	70.	200.	L.001
HIGH	316.	310.	191.	30000.	1200.	400.	8800.	.007
AVERAGE	270.	258.	171.	6917.	549.	208.	2398.	.003*
STD.DEV.	50.	51.	15.	7886.	349.	97.	2920.	.002*
PERCNT:10TH			157.	1400.	210.	110.	210.	L.001
25TH	221.	210.	166.	2800.	265.	145.	270.	.001*
MEDIAN 50TH	287.	270.	172.	4100.	475.	175.	1200.	.002
75TH	312.	300.	182.	8450.	840.	285.	4500.	.004
90TH			186.	11000.	1000.	330.	7200.	.005
SECONDARY CODE				02L	12L			

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0007 -  0009 PAGE   6                   NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                    SURFACE WATER DATA
STATION 00AL05EB2302    LAT. 53D 36M 30S  LONG. 113D 20M 39S   PR 3   UTM 12 344900E 5942300N  FOR MAY 18, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER       CENTRE     DOWNSTREAM OF CLOVERBAR POWER PLANT
 NEAR POWER TRANSMISSION LINES

                             30009L      26304L      13306L      25003L      28009L      42009L      27009L      33005L
                              ZINC        IRON      ALUMINUM   MANGANESE     NICKEL    MOLYBDENUM    COBALT     ARSENIC
                             TOTAL      EXTRBLE.    EXTRBLE.     TOTAL       TOTAL       TOTAL       TOTAL      TOTAL

                    SUBM      ZN          FE          AL          MN          NI          MO          CO          AS
                     ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)               12(0)       12(0)        8(0)        9(0)       12(1)        7(6)       12(12)       7(2)
           LOW                .012         .03        .179        .009       L.001       L.001       L.001      L.0002
          HIGH                .062        1.26       4.290        .120        .010        .009       L.001       .0007
       AVERAGE                .030         .38        .921        .031        .006*       .002*                  .0004*
      STD.DEV.                .014         .40       1.403        .037        .002*       .003*                  .0002*
   PERCNT:10TH                .012         .06                                .004                   L.001
          25TH                .021         .14        .262        .011        .004       L.001       L.001      L.0002
   MEDIAN 50TH                .028         .24        .354        .013        .005       L.001       L.001       .0004
          75TH                .036         .51        .833        .036        .007       L.001       L.001       .0005
          90TH                .046        1.03                                .009                   L.001
SECONDARY CODE

                             04304L      48009L      24009L      82302L      82009L      80015L      34005L      23009L
                           BERYLLIUM    CADMIUM     CHROMIUM      LEAD        LEAD       MERCURY    SELENIUM    VANADIUM
                            EXTRBLE.     TOTAL       TOTAL      EXTRBLE.     TOTAL       TOTAL      TOTAL       TOTAL

                    SUBM      BE          CD          CR          PB          PB          HG          SE          V
                     ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)                8(8)       12(12)      12(0)                   12(6)                    7(7)        7(5)
           LOW               L.001       L.001        .004                   L.003                  L.0002       L.002
          HIGH               L.001       L.001        .012                    .024                  L.0002        .012
       AVERAGE                                        .007                    .006*                               .004*
      STD.DEV.                                        .002                    .006*                               .004*
   PERCNT:10TH                           L.001        .004                   L.003
          25TH               L.001       L.001        .005                   L.003                  L.0002       L.002
   MEDIAN 50TH               L.001       L.001        .006                    .003*                 L.0002       L.002
          75TH               L.001       L.001        .008                    .007                  L.0002        .003
          90TH                           L.001        .009                    .008
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE   7                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                    SURFACE WATER DATA
STATION 00AL05EB2303    LAT. 53D 36M 27S  LONG. 113D 20M 42S   PR 3   UTM 12 344850E 5942200N  FOR MAY 18, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     DOWNSTREAM OF CLOVERBAR POWER PLANT
 NEAR POWER TRANSMISSION LINES

                           97251F        02065F        08102F        02042F        02041L        10301L        08202L        08301L
                          DEPTH OF    TEMPERATURE      OXYGEN       SPECIFIC      SPECIFIC         PH          OXYGEN        OXYGEN
                          SAMPLING       WATER        DISSOLVED     CONDUCT.      CONDUCT.                    BIOCHEM.     TOTAL COD
                                                                                                             DEMAND-BOD
                  SUBM   FROM SURF.                     02                                                       02            02
                   ID        M          DEG.C          MG/L        USIE/CM        US/CM       PH UNITS        MG/L          MG/L
SAMPLES(FLAGS)             12(0)        12(0)         12(0)         11(0)         12(0)        12(0)          12(0)         12(0)
           LOW                .6           2.            7.3          310.          277.          7.9             .6           6.4
          HIGH               1.8         21.5            15.          430.          372.          8.3            9.2           29.
       AVERAGE                .9         15.8           10.0          379.          341.                         3.4          17.3
      STD.DEV.                .4          6.4            2.2           36.           29.                         3.2           7.0
   PERCNT:10TH                .6          6.5            8.3          335.          305.          7.9             .6           10.
          25TH                .6         12.7            8.3          355.          323.          8.0            1.2          12.0
   MEDIAN 50TH                .9         18.3            9.2          380.          351.          8.1            2.1          17.0
          75TH               1.0         20.3           11.5          410.          364.          8.2            5.8          22.5
          90TH               1.2         21.5           12.4          410.          366.          8.3            8.2           27.
SECONDARY CODE

                           06536L        06005L        06154L        06107L        06905L        06715L        06721L        10151L
                          PHENOLIC       CARBON        CARBON        CARBON        CARBON       CHLORO -     CHLOROPHYLL   ALKALINITY
                          MATERIAL       TOTAL        DISSOLVED     DISSOLVED   PARTICULATE     PHYLL A         -A-          PHENOL
                           PHENOL       ORGANIC       INORGANIC      ORGANIC        TOTAL                     EPILITHON     PHTHALEIN
                  SUBM                     C              C             C             C                                      CACO3
                   ID       MG/L          MG/L          MG/L          MG/L          MG/L          MG/M3         MG/M2          MG/L
SAMPLES(FLAGS)             12(6)        11(0)                                                                               11(0)
           LOW              L.002           5.                                                                                 .0
          HIGH               .005         14.5                                                                                 0.
       AVERAGE               .003*        10.2                                                                                 .0
      STD.DEV.               .001*         2.8                                                                                 .0
   PERCNT:10TH              L.002          7.5                                                                                 .0
          25TH              L.002          7.9                                                                                 .0
   MEDIAN 50TH               .002*        10.3                                                                                 0.
          75TH               .003         12.6                                                                                 0.
          90TH               .004         13.1                                                                                 0.
SECONDARY CODE

                           10101L        06301L        06201L        17203L        16306L        09107L        14102L        10602L
                         ALKALINITY    CARBONATE     BICARBONT.     CHLORIDE      SULPHATE      FLUORIDE       SILICA       HARDNESS
                           TOTAL        (CALCD.)       (CALCD.)     DISSOLVED     DISSOLVED     DISSOLVED     REACTIVE        TOTAL
                                                                                                                            (CALCD.)
                  SUBM      CACO3          CO3         HCO3            CL           SO4            F            SIO2          CACO3
                   ID       MG/L          MG/L        MG/L            MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)             12(0)        11(0)         11(0)         12(3)         12(0)        12(0)          12(0)         12(0)
           LOW              115.           0.           140.           L0.           25.          .13            3.2          127.
          HIGH              149.           0.           180.            8.           40.          .20            5.6          171.
       AVERAGE              135.           0.           163.           2.7*          34.          .16            4.3          150.
      STD.DEV.               12.           0.            14.           1.9*           5.          .02             .7           13.
   PERCNT:10TH              117.           0.           143.           L0.           25.          .14            3.5          136.
          25TH              128.           0.           155.           1.5*          30.          .15            3.9          141.
   MEDIAN 50TH              137.           0.           166.           2.0           35.          .16            4.2          145.
          75TH              146.           0.           177.           3.0           38.          .17            4.6          162.
          90TH              148.           0.           179.            4.           40.          .18            5.1          164.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE   8                          NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                           SURFACE WATER DATA
STATION 00AL05EB2303    LAT. 53D 36M 27S  LONG. 113D 20M 42S   PR 3   UTM 12 344850E 5942200N  FOR MAY 18, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     DOWNSTREAM OF CLOVERBAR POWER PLANT
  NEAR POWER TRANSMISSION LINES

                           20110L       12102L       11103L       19103L       15406L       15419L       07403L       07602L
                           CALCIUM      MAGNESIUM    SODIUM       POTASSIUM    PHOSPHOROUS  PHOSPHORUS   NITROGEN     NITROGEN
                           DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    TOTAL        TOTAL        TOTAL ORG.   TOTAL
                                                                               PHOSPHATE    PHOSPHATE    (CALCD.)     (CALCD.)
                    SUBM   CA           MG           NA           K            P            P            N            N
                    ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             12(0)        12(0)        12(0)        12(0)        9(0)         5(0)         12(12)       12(5)
           LOW               36.           9.           3.           .7          .07         .114        Q.100        Q.600
          HIGH               47.          14.          13.          1.5         .195         .180        Q.300         .900
       AVERAGE               42.          11.3          7.9         1.1         .144         .154                      .693*
      STD.DEV.                3.           1.4          2.7          .2         .039         .027                      .095*
  PERCNT:10TH                38.          10.           6.          1.0                                   Q.100         .620
          25TH               40.          10.0          6.0         1.0         .124         .142         .100         .620
   MEDIAN 50TH               41.          11.0          8.0         1.0         .141         .160         .150         .660
          75TH               45.          12.0          8.5         1.3         .164         .173         .200         .745
          90TH               46.          13.          12.          1.3                                   Q.300         .830
SECONDARY CODE                                                                              21L

                           07021L       07503L       07562L       07205L       07206L       07105L       07906L       10407L
                           NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     RESIDUE
                           TOTAL        TOTAL        DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    PARTICULATE  NONFILTRABLE
                           KJELDAHL     AMMONIA      AMMONIA      NITRITE      NITRITE      NO3 & NO2    TOTAL
                    SUBM   N            N            N            N            N            N            N
                    ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             12(1)        12(12)       5(0)         12(11)       12(2)        12(1)                     5(0)
           LOW              L.5          L.4          .218        L.05         L.007        L.05                       12.
          HIGH               .7          L.4          .450         .07          .035         .23                       20.
       AVERAGE               .605*                    .371         .052*        .018*        .126*                     16.
      STD.DEV.               .066*                    .094         .006*        .009*        .052*                      3.
  PERCNT:10TH                .5          L.4                      L.05         L.007         .07
          25TH               .575        L.40         .345        L.050         .010         .090                      15.
   MEDIAN 50TH               .600        L.40         .410        L.050         .016         .120                      16.
          75TH               .665        L.40         .433        L.050         .021         .145                      18.
          90TH               .680        L.4                      L.05          .034         .20
SECONDARY CODE             01L

                           10474L       10453L       00205L       36001L       36011L       36102L       36910L       29009L
                           RESIDUE      RESIDUE      TOTAL        COLIFORMS    COLIFORMS    STREP.       STD. PLATE   COPPER
                           TOTAL        FILTRABLE    DISSOLVED    TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                     SOLIDS                                              BACT.DENS.
                    SUBM                                          MPN          MPN          MF                        CU
                    ID     MG/L         MG/L         MG/L         NO/100ML     NO/100ML     NO/100ML     NO/ML        MG/L
SAMPLES(FLAGS)             5(0)         5(0)         12(0)        12(0)        12(0)        12(0)        11(0)        12(3)
           LOW              205.         190.         150.        2500.          72.          70.         260.        L.001
          HIGH              312.         300.         201.       22000.        4700.         490.       15000.         .007
       AVERAGE              270.         254.         180.        9650.        1222.         265.        3811.         .003*
      STD.DEV.               47.          47.          15.        6285.        1210.         131.        4626.         .002*
  PERCNT:10TH                                         163.        4200.         170.         120.         460.        L.001
          25TH              236.         220.         170.        5400.         525.         190.         600.         .001*
   MEDIAN 50TH              298.         280.         180.        7300.        1000.         205.        1600.         .002
          75TH              300.         280.         195.       12000.        1400.         385.        6800.         .004
          90TH                                        196.       21000.        1700.         420.        8800.         .006
SECONDARY CODE                                                   02L          12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE   9                     NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                     SURFACE WATER DATA
STATION 00AL05EB2303    LAT. 53D 36M 27S  LONG. 113D 20M 42S   PR 3   UTM 12 344850E 5942200N  FOR MAY 18, 1982 TO NOV 02, 1982
 NORTH SASKATCHEWAN RIVER   RIGHT BANK      DOWNSTREAM OF CLOVERBAR POWER PLANT
 NEAR POWER TRANSMISSION LINES

                       30009L        26304L        13306L        25003L        28009L        42009L        27009L        33005L
                         ZINC          IRON      ALUMINUM     MANGANESE        NICKEL    MOLYEDENUM        COBALT       ARSENIC
                        TOTAL      EXTRBLE.      EXTRBLE.         TOTAL         TOTAL         TOTAL         TOTAL         TOTAL

                SUBM        ZN            FE            AL            MN            NI            MO            CO            AS
                 ID       MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          12(0)         12(0)          8(0)          8(0)         12(0)          7(7)        12(11)          7(2)
           LOW           .002           .05          .152          .013          .003         L.001         L.001        L.0002
          HIGH           .058           .95         3.940          .113          .016         L.001          .003         .0009
       AVERAGE           .033           .36          .942          .035          .007                       .001*        .0004*
      STD.DEV.           .017           .32         1.327          .034          .003                       .001*        .0003*
   PERCNT:10TH           .014           .12                                      .004                       L.001
          25TH           .020           .19          .290          .015          .006         L.001         L.001        L.0002
   MEDIAN 50TH           .037           .22          .321          .018          .006         L.001         L.001         .0004
          75TH           .044           .55         1.110          .044          .007         L.001         L.001         .0006
          90TH           .052           .90                                      .010                       L.001
SECONDARY CODE

                       04304L        48009L        24009L        82302L        82009L        80015L        34005L        23009L
                    BERYLLIUM       CADMIUM      CHROMIUM          LEAD          LEAD       MERCURY      SELENIUM      VANADIUM
                     EXTRBLE.         TOTAL         TOTAL      EXTRBLE.         TOTAL         TOTAL         TOTAL         TOTAL

                SUBM        BE            CD            CR            PB            PB            HG            SE             V
                 ID       MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)           8(8)        12(11)         11(1)                       12(6)                        6(4)          7(3)
           LOW          L.001         L.001         L.001                       L.003                      L.0002         L.002
          HIGH          L.001          .005          .013                        .008                       .0003          .013
       AVERAGE                        .001*         .007*                       .005*                      .0002*         .004*
      STD.DEV.                        .001*         .003*                       .002*                      .0001*         .004*
   PERCNT:10TH                        L.001          .005                       L.003
          25TH          L.001         L.001          .005                       L.003                      L.0002         L.002
   MEDIAN 50TH          L.001         L.001          .006                       .003*                      L.0002          .003
          75TH          L.001         L.001          .009                        .006                       .0003          .004
          90TH                        L.001          .011                        .008
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  10                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                      SURFACE WATER DATA
STATION 00AL05EB2371    LAT. 53D 42M 53S  LONG. 113D 14M 27S   PR 3   UTM 12 352150E 5953900N  FOR MAY 18, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER     LEFT BANK     ABOVE FORT SASK. RAILWAY TRESTLE
 90M UPSTREAM

                      97251F       02065F       08102F       02042F       02041L       10301L       08202L       08301L
                     DEPTH OF    TEMPERATURE    OXYGEN      SPECIFIC     SPECIFIC        PH         OXYGEN       OXYGEN
                     SAMPLING       WATER      DISSOLVED    CONDUCT.     CONDUCT.                   BIOCHEM.    TOTAL COD
                                                                                                  DEMAND-BOD
                SUBM  FROM SURF.                  O2                                                  O2           O2
                 ID      M          DEG.C        MG/L       USIE/CM       US/CM      PH UNITS        MG/L         MG/L
SAMPLES(FLAGS)         17(0)        21(0)        21(0)        20(0)        22(0)        22(0)        19(3)        21(3)
           LOW            .1           .4          7.2         235.         275.          7.7           .4         L5.0
          HIGH           2.1         24.0         14.0         430.         376.          8.6           3.         29.7
       AVERAGE           1.0         14.2         10.1         359.         332.                       1.5*        12.8*
      STD.DEV.            .5          7.4          2.1          45.          25.                        .8*         7.1*
  PERCNT:10TH             .3          1.0          8.1         310.         310.          7.9           .5         L5.0
          25TH            .6          9.0          8.7         340.         319.          8.0         L1.0          7.3
    MEDIAN 50TH           .9          17.          9.2         365.         334.          8.1          1.3          11.
          75TH           1.2         19.5         12.0         385.         347.          8.4          2.3          17.
          90TH           1.8          21.         13.4         415.         364.          8.5          2.7         24.8
SECONDARY CODE                                                                                                 04L

                      06536L       06005L       06154L       06107L       06905L       06715L       06721L       10151L
                     PHENOLIC      CARBON       CARBON       CARBON       CARBON      CHLORO -    CHLOROPHYLL  ALKALINITY
                     MATERIAL      TOTAL      DISSOLVED    DISSOLVED   PARTICULATE    PHYLL A        -A-         PHENOL
                      PHENOL      ORGANIC     INORGANIC     ORGANIC       TOTAL                   EPILITHON    PHTHALEIN
                SUBM                 C            C            C            C                                    CACO3
                 ID     MG/L        MG/L         MG/L         MG/L         MG/L         MG/M3        MG/M2        MG/L
SAMPLES(FLAGS)         22(15)       11(0)        14(0)        14(0)        14(0)         9(0)         9(0)        20(6)
           LOW         L.001          6.8         31.0           .6          .03         1.43       18.513           .0
          HIGH          .004          10.         35.6         45.0         5.02         9.66       270.11          4.2
       AVERAGE          .002*         8.5         32.7          5.5         1.71         3.87       95.776          1.5*
      STD.DEV.          .001*         1.2          1.8         11.5         1.28         2.36      100.415          2.1*
  PERCNT:10TH          L.002          7.2         31.0           .9          .37                                   .0
          25TH         L.002          7.6         31.0          1.2         1.10         2.75       23.960           .0
    MEDIAN 50TH        L.002          8.2         32.0          1.5         1.33         2.93       42.931           .0
          75TH          .002          10.         34.0          4.1         2.10         4.24       200.40         L4.2
          90TH          .003          10.         35.0          6.7         3.27                                 L4.2
SECONDARY CODE         37L

                      10101L       06301L       06201L       17203L       16306L       09107L       14102L       10602L
                    ALKALINITY   CARBONATE    BICARBONT.    CHLORIDE     SULPHATE     FLUORIDE      SILICA      HARDNESS
                       TOTAL      (CALCD.)      (CALCD.)    DISSOLVED    DISSOLVED    DISSOLVED    REACTIVE       TOTAL
                                                                                                                (CALCD.)
                SUBM   CACO3        CO3         HCO3           CL          SO4           F          SIO2         CACO3
                 ID     MG/L        MG/L        MG/L          MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)         22(0)        20(6)        20(6)        21(10)       22(0)        22(0)        22(0)        22(0)
           LOW          116.           0.        Q132.          L0.          20.          .12          2.1         116.
          HIGH          150.           5.         174.          6.0          52.          .16          5.4         167.
       AVERAGE          132.           2.*        158.*         2.0*         37.          .14          3.8         149.
      STD.DEV.            8.           2.*         11.*         1.5*          8.          .01           .9          12.
  PERCNT:10TH           125.           0.         142.          L0.          27.          .12          3.0         135.
          25TH          128.           0.         149.          L0.          30.          .13          3.4         141.
    MEDIAN 50TH         132.           0.         162.           2.          40.          .14          3.7         153.
          75TH          137.           5.         167.           2.          42.          .15          4.2         154.
          90TH          143.           5.         170.           3.          45.          .15          5.2         159.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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NAQUADAT SUMMARY REPORT APR 30, 1986
SURFACE WATER DATA

STATION 00AL05EB2371 LAT. 53D 42M 53S LONG. 113D 14M 27S PR 3 UTM 12 352150E 5953900N FOR MAY 18, 1982 TO FEB 29, 1984
NORTH SASKATCHEWAN RIVER LEFT BANK ABOVE FORT SASK. RAILWAY TRESTLE
90M UPSTREAM

SUBM ID	20110L CALCIUM DISSOLVED CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	11103L SODIUM DISSOLVED NA MG/L	19103L POTASSIUM DISSOLVED K MG/L	15406L PHOSPHOROUS TOTAL PHOSPHATE P MG/L	15419L PHOSPHORUS TOTAL PHOSPHATE P MG/L	07403L NITROGEN TOTAL ORG. (CALCD.) N MG/L	07602L NITROGEN TOTAL (CALCD.) N MG/L
SAMPLES(FLAGS)	22(0)	22(0)	22(0)	22(0)	8(0)	11(0)	11(11)	22(15)
LOW	35.	7.	3.	.6	.011	.054	Q.100	.310
HIGH	47.	13.0	9.	1.6	.162	.180	Q.300	.920
AVERAGE	41.	11.2	6.0	1.0	.071	.092		.569*
STD.DEV.	3.	1.3	1.7	.3	.046	.039		.144*
PERCNT:10TH	37.	10.	4.	.8		.058	Q.100	Q.390
25TH	40.	11.	5.	.8	.043	.059	Q.100	Q.530
MEDIAN 50TH	41.	11.5	6.0	.9	.066	.090	Q.100	.550
75TH	42.	12.	7.0	1.1	.089	.126	Q.100	Q.600
90TH	45.	12.0	8.0	1.5		.130	Q.200	.760
SECONDARY CODE						21L		

SUBM ID	07021L NITROGEN TOTAL KJELDAHL N MG/L	07503L NITROGEN TOTAL AMMONIA N MG/L	07562L NITROGEN DISSOLVED AMMONIA N MG/L	07205L NITROGEN DISSOLVED NITRITE N MG/L	07206L NITROGEN DISSOLVED NITRITE N MG/L	07105L NITROGEN DISSOLVED NO3 & NO2 N MG/L	07906L NITROGEN PARTICULATE TOTAL N MG/L	10407L RESIDUE NONFILTRABLE MG/L
SAMPLES(FLAGS)	22(9)	11(11)	11(0)	22(20)	11(7)	22(13)	14(3)	15(0)
LOW	.240	L.4	.051	L.05	L.007	L.05	L.01	2.
HIGH	.720	L.4	.540	.08	.025	.20	2.34	101.
AVERAGE	.496*		.207	.052*	.010*	.072*	.285*	24.
STD.DEV.	.120*		.162	.008*	.006*	.041*	.614*	25.
PERCNT:10TH	.340	L.4	.062	L.05	L.007	L.05	L.01	7.
25TH	.460	L.4	.070	L.05	L.007	L.05	.05	9.
MEDIAN 50TH	L.500	L.4	.124	L.050	L.007	L.050	.085	15.
75TH	.500	L.4	.310	L.05	.015	.070	.17	36.
90TH	.7	L.4	.380	L.050	.015	.100	.66	40.
SECONDARY CODE	01L							

SUBM ID	10474L RESIDUE TOTAL MG/L	10453L RESIDUE FILTRABLE MG/L	00205L TOTAL DISSOLVED SOLIDS MG/L	36001L COLIFORMS TOTAL MPN NO/100ML	36011L COLIFORMS FECAL MPN NO/100ML	36102L STREP. FECAL MF NO/100ML	36910L STD. PLATE COUNT BACT.DENS. NO/ML	29009L COPPER TOTAL CU MG/L
SAMPLES(FLAGS)	15(0)	15(0)	22(0)	20(0)	20(0)	20(0)	18(0)	22(5)
LOW	210.	170.	138.	900.	130.	8.	200.	L.001
HIGH	321.	290.	201.	35000.	13000.	1300.	20000.	.006
AVERAGE	269.	245.	178.	8995.	1753.	301.	4741.	.003*
STD.DEV.	29.	28.	15.	9447.	3114.	365.	5999.	.001*
PERCNT:10TH	230.	220.	160.	1700.	180.	47.	250.	L.001
25TH	247.	230.	168.	2500.	285.	70.	870.	.002
MEDIAN 50TH	269.	250.	178.	4000.	590.	130.	1850.	.003
75TH	296.	260.	190.	12500.	1525.	420.	6400.	.003
90TH	300.	270.	196.	24500.	5350.	905.	16000.	.005
SECONDARY CODE				02L	12L			

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

REQUEST 0007 - 0009 PAGE 12

NAQUADAT SUMMARY REPORT APR 30, 1986
SURFACE WATER DATA

STATION 00AL05EB2371 LAT. 53D 42M 53S LONG. 113D 14M 27S PR 3 UTM 12 352150E 5953900N FOR MAY 18, 1982 TO FEB 29, 1984
NORTH SASKATCHEWAN RIVER LEFT BANK ABOVE FORT SASK. RAILWAY TRESTLE
90M UPSTREAM

	30009L ZINC TOTAL	26304L IRON EXTRBLE.	13306L ALUMINUM EXTRBLE.	25003L MANGANESE TOTAL	28009L NICKEL TOTAL	42009L MOLYBDENUM TOTAL	27009L COBALT TOTAL	33005L ARSENIC TOTAL
SUBM ID	ZN MG/L	FE MG/L	AL MG/L	MN MG/L	NI MG/L	MO MG/L	CO MG/L	AS MG/L
SAMPLES(FLAGS)	22(1)	22(1)	18(0)	19(3)	22(2)	18(16)	22(21)	14(2)
LOW	L.001	L.02	.060	L.008	L.001	L.001	L.001	L.0002
HIGH	.057	1.59	5.080	.092	.008	.006	.003	.0014
AVERAGE	.020*	.35*	.599	.024*	.004*	.001*	.001*	.0005*
STD.DEV.	.018*	.40*	1.183	.022*	.002*	.001*	.000*	.0003*
PERCNT:10TH	.003	.05	.065	L.008	.003	L.001	L.001	L.0002
25TH	.004	.10	.128	.010	.003	L.001	L.001	.0003
MEDIAN 50TH	.014	.22	.185	.015	.004	L.001	L.001	.0005
75TH	.038	.44	.538	.038	.006	L.001	L.001	.0007
90TH	.042	.56	1.530	.050	.006	.004	L.001	.0008
SECONDARY CODE								

	04304L BERYLLIUM EXTRBLE.	48009L CADMIUM TOTAL	24009L CHROMIUM TOTAL	82302L LEAD EXTRBLE.	82009L LEAD TOTAL	80015L MERCURY TOTAL	34005L SELENIUM TOTAL	23009L VANADIUM TOTAL
SUBM ID	BE MG/L	CD MG/L	CR MG/L	PB MG/L	PB MG/L	HG MG/L	SE MG/L	V MG/L
SAMPLES(FLAGS)	18(18)	22(18)	22(7)	9(4)	11(6)	11(11)	12(12)	18(8)
LOW	L.001	L.000	L.001	L.003	L.003	L.0001	L.0002	L.002
HIGH	L.001	60.001	.008	.008	.104	L.0001	L.0002	.013
AVERAGE		2.728*	.004*	.004*	.013*			.004*
STD.DEV.		12.792*	.002*	.002*	.030*			.003*
PERCNT:10TH	L.001	L.001	L.001		L.003	L.0001	L.0002	L.002
25TH	L.001	L.001	L.001	L.003	L.003	L.0001	L.0002	L.002
MEDIAN 50TH	L.001	L.001	.005	.004	L.003	L.0001	L.0002	.003
75TH	L.001	L.001	.006	.005	.006	L.0001	L.0002	.004
90TH	L.001	.002	.006		.006	L.0001	L.0002	.007
SECONDARY CODE								

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0001 -  0003 PAGE  13                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                      SURFACE WATER DATA
STATION 00AL05EB2372    LAT. 53D 42M 50S  LONG. 113D 14M 23S   PR 3   UTM 12 352200E 5953800N  FOR MAY 18, 1982 TO SEP 21, 1983
 NORTH SASKATCHEWAN RIVER        CENTRE     ABOVE FORT SASK. RAILWAY TRESTLE
 90M UPSTREAM

                      97251F       02065F       08102F       02042F       02041L       10301L       08202L       08301L
                      DEPTH OF     TEMPERATURE  OXYGEN       SPECIFIC     SPECIFIC     PH           OXYGEN       OXYGEN
                      SAMPLING     WATER        DISSOLVED    CONDUCT.     CONDUCT.                  BIOCHEM.     TOTAL COD
                                                                                                    DEMAND-BOD
                SUBM  FROM SURF.                O2                                                  O2           O2
                 ID   M            DEG.C        MG/L         USIE/CM      US/CM        PH UNITS     MG/L         MG/L
SAMPLES(FLAGS)        13(0)        18(0)        18(0)        18(0)        18(0)        18(0)        15(1)        18(0)
           LOW             .6          4.5          7.         300.         275.           7.7          .3           5.6
          HIGH            2.4         24.0         13.         450.         378.           8.5         2.7          25.3
       AVERAGE            1.7         16.4          9.6        368.         332.                       1.5*         13.7
      STD.DEV.             .5          5.3          1.7         39.          25.                        .7*          5.9
   PERCNT:10TH            1.2          7.7          7.6        320.         294.           7.8          .6           5.9
          25TH            1.5         14.           8.3        340.         319.           7.9        L1.0           9.4
   MEDIAN 50TH            1.8         18.0          9.1        365.         335.           8.0         1.4          13.3
          75TH            2.1         20.          10.6        390.         347.           8.3         1.9          18.
          90TH            2.4         21.5         12.6        435.         372.           8.5         2.6          25.
SECONDARY CODE                                                                                                   04L

                      06536L       06005L       06154L       06107L       06905L       06715L       06721L       10151L
                      PHENOLIC     CARBON       CARBON       CARBON       CARBON       CHLORO -     CHLOROPHYLL  ALKALINITY
                      MATERIAL     TOTAL        DISSOLVED    DISSOLVED    PARTICULATE  PHYLL A      -A-          PHENOL
                      PHENOL       ORGANIC      INORGANIC    ORGANIC      TOTAL                     EPILITHON    PHTHALEIN
                SUBM               C            C            C            C                                      CACO3
                 ID   MG/L         MG/L         MG/L         MG/L         MG/L         MG/M3        MG/M2        MG/L
SAMPLES(FLAGS)        18(12)       10(0)        8(0)         8(0)         8(0)         8(0)                      18(3)
           LOW           L.002         6.          31.0           .8          .12         1.37                      .0
          HIGH            .004        11.6         36.0          6.8         7.52        12.53                    L4.2
       AVERAGE            .002*        9.0         32.6          3.0         1.99         4.37                      .7*
      STD.DEV.            .001*        1.9          1.8          2.2         2.39         3.45                     1.6*
   PERCNT:10TH           L.002         6.4                                                                          .0
          25TH           L.002         7.4         31.0          1.2          .66         2.62                      .0
   MEDIAN 50TH           L.002         9.9         32.0          2.3         1.25         3.54                      .0
          75TH            .002        10.          34.0          4.7         2.24         4.38                      .0
          90TH            .003        11.3                                                                        L4.2
SECONDARY CODE        37L

                      10101L       06301L       06201L       17203L       16306L       09107L       14102L       10602L
                      ALKALINITY   CARBONATE    BICARBONT.   CHLORIDE     SULPHATE     FLUORIDE     SILICA       HARDNESS
                      TOTAL        (CALCD.)     (CALCD.)     DISSOLVED    DISSOLVED    DISSOLVED    REACTIVE     TOTAL
                                                                                                                 (CALCD.)
                SUBM  CACO3        CO3          HCO3         CL           SO4          F            SIO2         CACO3
                 ID   MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)        18(0)        18(3)        18(3)        18(9)        18(0)        18(0)        18(0)        18(0)
           LOW           116.           0.         141.          L0.          25.           .11          2.2        114.
          HIGH           150.          Q5.         183.           3.          45.           .16          5.4        169.
       AVERAGE           132.           1.*        159.*          1.6*        36.           .14          4.0        147.
      STD.DEV.             9.           2.*         12.*           .7*         6.           .01           .9         14.
   PERCNT:10TH           117.           0.         143.          L0.          25.           .11          2.4        124.
          25TH           126.           0.        Q152.          L0.          30.           .13          3.5        139.
   MEDIAN 50TH           133.           0.         160.           1.5*        38.           .14          4.0        149.
          75TH           137.           0.         167.           2.          41.           .14          4.4        154.
          90TH           146.          Q5.         178.           3.          43.           .16          5.2        164.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  14                     NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                       SURFACE WATER DATA
STATION 00AL05EB2372    LAT. 53D 42M 50S  LONG. 113D 14M 23S   PR 3   UTM 12 352200E 5953800N  FOR MAY 18, 1982 TO SEP 21, 1983
 NORTH SASKATCHEWAN RIVER        CENTRE     ABOVE FORT SASK. RAILWAY TRESTLE
 90M UPSTREAM

                          20110L       12102L       11103L       19103L       15406L       15419L       07403L       07602L
                         CALCIUM     MAGNESIUM      SODIUM     POTASSIUM   PHOSPHOROUS   PHOSPHORUS    NITROGEN     NITROGEN
                        DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL        TOTAL      TOTAL ORG.     TOTAL
                                                                            PHOSPHATE    PHOSPHATE     (CALCD.)     (CALCD.)
                   SUBM    CA           MG           NA           K            P            P            N            N
                    ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)           18(0)        18(0)        18(0)        18(0)         8(0)        11(0)        10(10)       18(10)
           LOW              34.           7.           2.           .6         .013         .052        Q.100        Q.310
          HIGH              48.          13.          10.          1.7         .121         .180        Q.300         .960
       AVERAGE              41.         10.9          6.2          1.0         .059         .105                     .602*
      STD.DEV.               4.          1.4          2.0           .3         .039         .049                     .175*
  PERCNT:10TH               35.           9.           3.           .7                      .053         .100         .360
          25TH              39.          10.           5.           .9         .021         .064        Q.100        Q.550
   MEDIAN 50TH              41.         11.0          6.0          1.0         .061         .092         .100         .550
          75TH              42.          12.           7.          1.2         .088         .162        Q.100        Q.650
          90TH              46.          12.           9.          1.5                      .162         .250         .890
SECONDARY CODE                                                                          21L

                          07021L       07503L       07562L       07205L       07206L       07105L       07906L       10407L
                         NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     RESIDUE
                          TOTAL        TOTAL      DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED   PARTICULATE NONFILTRABLE
                         KJELDAHL     AMMONIA      AMMONIA      NITRITE      NITRITE     NO3 & NO2      TOTAL
                   SUBM     N            N            N            N            N            N            N
                    ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)           18(5)        10(9)        11(1)        18(14)       10(7)        18(9)         8(1)        11(0)
           LOW             .260          L.4        L.002         L.05        L.007         L.05        L.001           8.
          HIGH             .680           .4         .510          .13         .039          .30          .60          49.
       AVERAGE             .486*         .40*        .148*        .057*        .013*        .099*        .154*         27.
      STD.DEV.             .132*         .00*        .152*        .020*        .011*        .073*        .198*         15.
  PERCNT:10TH              .260         L.40         .010         L.05        L.007         L.05                       9.
          25TH             .380          L.4         .031         L.05        L.007         L.05         .030           9.
   MEDIAN 50TH            L.500         L.40         .120        L.050        L.007         .060*        .085          32.
          75TH               .6          L.4         .210         L.05         .015          .13         .200          42.
          90TH             .660          .40*        .322          .08         .032          .25                      42.
SECONDARY CODE           01L

                          10474L       10453L       00205L       36001L       36011L       36102L       36910L       29009L
                         RESIDUE      RESIDUE       TOTAL      COLIFORMS    COLIFORMS      STREP.     STD. PLATE     COPPER
                          TOTAL      FILTRABLE    DISSOLVED      TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                    SOLIDS                                            BACT.DENS.
                   SUBM                                          MPN          MPN           MF                       CU
                    ID    MG/L         MG/L         MG/L       NO/100ML     NO/100ML     NO/100ML       NO/ML        MG/L
SAMPLES(FLAGS)           11(0)        11(0)        18(0)        18(0)        18(0)        18(1)        16(0)        18(5)
           LOW             229.         200.         151.        1200.         180.          L2.         340.        L.001
          HIGH             322.         290.         202.       37000.       33000.        1700.       16000.         .024
       AVERAGE             264.         237.         176.        8656.        2838.        268.*        4923.         .004*
      STD.DEV.              33.          28.          15.        9773.        7622.        400.*        4665.         .005*
  PERCNT:10TH              230.         210.         153.        1600.         240.          10.         480.        L.001
          25TH             232.         220.         165.        3100.         350.          90.        1400.        L.001
   MEDIAN 50TH             252.         230.         176.        5500.         765.         130.        3200.         .003
          75TH             292.         250.         184.        8200.        1500.         290.        7850.         .003
          90TH             304.         280.         201.       30000.        5300.         770.       12000.         .004
SECONDARY CODE                                                  02L          12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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                                                NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                  SURFACE WATER DATA
STATION 00AL05EB2372    LAT. 53D 42M 50S  LONG. 113D 14M 23S   FR 3   UTM 12 352200E 5953800N  FOR MAY 18, 1982 TO SEP 21, 1983
 NORTH SASKATCHEWAN RIVER        CENTRE     ABOVE FORT SASK. RAILWAY TRESTLE
 90M UPSTREAM

                           30009L     26304L     13306L      25003L     28009L      42009L      27009L      33005L
                            ZINC       IRON     ALUMINUM   MANGANESE    NICKEL   MOLYBDENUM    COBALT     ARSENIC
                           TOTAL     EXTRBLE.   EXTRBLE.     TOTAL      TOTAL       TOTAL       TOTAL      TOTAL

                    SUBM     ZN         FE         AL          MN         NI          MO          CO          AS
                     ID     MG/L       MG/L       MG/L        MG/L       MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             18(1)      18(0)      14(0)       15(1)      18(2)       14(13)      18(18)      10(3)
           LOW             L.001        .03       .050       L.008      L.001       L.001       L.001      L.0002
          HIGH              .055       1.41      3.230        .094       .009        .004       L.001       .0015
       AVERAGE              .020*       .40       .571        .031*      .005*       .001*                   .0006*
      STD.DEV.              .018*       .35       .858        .025*      .002*       .001*                   .0004*
   PERCNT:10TH              .003        .04       .118        .009      L.001       L.001       L.001      L.0002
          25TH              .004        .13       .165        .010       .003       L.001       L.001      L.0002
   MEDIAN 50TH              .013        .40       .255        .022       .004       L.001       L.001       .0005
          75TH              .033        .51       .528        .049       .006       L.001       L.001       .0008
          90TH              .054        .89      1.620        .059       .008       L.001       L.001       .0012
SECONDARY CODE

                           04304L     48009L     24009L      82302L     82009L      80015L      34005L      23009L
                         BERYLLIUM   CADMIUM    CHROMIUM      LEAD       LEAD      MERCURY     SELENIUM    VANADIUM
                          EXTRBLE.    TOTAL      TOTAL      EXTRBLE.     TOTAL       TOTAL      TOTAL        TOTAL

                    SUBM     BE         CD         CR          PB         PB          HG          SE          V
                     ID     MG/L       MG/L       MG/L        MG/L       MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             14(14)     18(16)     18(5)        6(4)      10(5)        8(8)       10(7)       14(5)
           LOW             L.001      L.001      L.001       L.003      L.003      L.0001      L.0002       L.002
          HIGH             L.001       .004       .007        .005       .092      L.0001       .0004        .009
       AVERAGE                         .001*      .004*       .004*      .013*                   .0002*       .004*
      STD.DEV.                         .001*      .002*       .001*      .028*                   .0001*       .002*
   PERCNT:10TH             L.001      L.001      L.001                  L.003                   L.0002       L.002
          25TH             L.001      L.001      L.001       L.003      L.003      L.0001      L.0002       L.002
   MEDIAN 50TH             L.001      L.001       .004       L.003       .004*     L.0001      L.0002        .004
          75TH             L.001      L.001       .006        .005       .006      L.0001       .0003        .006
          90TH             L.001       .002       .006                   .050                   .0004        .008
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  16                               NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                               SURFACE WATER DATA
STATION 00AL05EB2373    LAT. 53D 42M 47S  LONG. 113D 14M 20S   PR 3   UTM 12 352250E 5953700N  FOR MAY 18, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     ABOVE FORT SASK. RAILWAY TRESTLE
 90M UPSTREAM

                        97251F        02065F        08102F        02042F        02041L        10301L        08202L        08301L
                       DEPTH OF    TEMPERATURE      OXYGEN       SPECIFIC      SPECIFIC         PH          OXYGEN        OXYGEN
                       SAMPLING       WATER       DISSOLVED      CONDUCT.      CONDUCT.                    BIOCHEM.     TOTAL COD
                                                                                                          DEMAND-BOD
               SUBM  FROM SURF.                     O2                                                        O2            O2
                ID        M           DEG.C        MG/L         USIE/CM        US/CM       PH UNITS       MG/L          MG/L
 SAMPLES(FLAGS)         17(0)         20(0)        20(0)         20(0)         21(0)        21(0)         18(3)         21(2)
            LOW            .1            .5           7.          300.          278.          7.6            .6          L5.0
           HIGH           3.4          24.6         12.8          470.          390.          8.5           3.6          37.7
        AVERAGE           1.6          15.0          9.8          374.          346.                        1.8*         13.9*
       STD.DEV.            .9           7.0          1.9           44.           28.                         .9*          8.1*
    PERCNT:10TH            .3           2.9          7.4          323.          314.          7.8            .8           6.1
           25TH           1.2           9.5          8.2          340.          334.          7.9          L1.0           7.9
    MEDIAN 50TH           1.5          17.5          9.3          370.          347.          8.0           1.7           13.
           75TH           2.1          20.0         11.9          397.          361.          8.1           2.2           17.
           90TH            3.          20.8         12.6          438.          385.          8.3           3.4          22.7
 SECONDARY CODE                                                                                                        04L

                        06536L        06005L        06154L        06107L        06905L        06715L        06721L        10151L
                       PHENOLIC       CARBON        CARBON        CARBON        CARBON       CHLORO -    CHLOROPHYLL   ALKALINITY
                       MATERIAL       TOTAL       DISSOLVED     DISSOLVED    PARTICULATE     PHYLL A         -A-          PHENOL
                        PHENOL       ORGANIC      INORGANIC      ORGANIC        TOTAL                     EPILITHON     PHTHALEIN
               SUBM                     C             C             C             C                                     CACO3
                ID       MG/L          MG/L         MG/L          MG/L          MG/L          MG/M3         MG/M2         MG/L
 SAMPLES(FLAGS)         21(14)        10(0)        13(0)         13(0)         13(1)         9(0)          9(0)         19(2)
            LOW          L.002           7.         31.0            .7          L.01         1.53         9.445            .0
           HIGH           .005         10.3         36.0           7.5         13.42        14.39        204.38          L4.2
        AVERAGE           .003*         8.5         33.2           2.9          2.89*        5.04        86.920            .4*
       STD.DEV.           .001*         1.2          1.5           2.2          3.87*        3.66        74.209           1.3*
    PERCNT:10TH          L.002          7.0         32.0            .9           .43                                    .0
           25TH          L.002          7.3         32.0           1.4           .81         3.62        34.137            .0
    MEDIAN 50TH          L.002          9.0         33.0           1.7          1.44         4.28        52.643            .0
           75TH           .002          9.1         34.0           4.0          2.40         4.77        157.06            .0
           90TH           .004         10.1         35.6           6.7          8.60                                   L4.2
 SECONDARY CODE        37L

                        10101L        06301L        06201L        17203L        16306L        09107L        14102L        10602L
                      ALKALINITY    CARBONATE    BICARBONT.     CHLORIDE      SULPHATE      FLUORIDE       SILICA      HARDNESS
                        TOTAL        (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED     DISSOLVED     REACTIVE        TOTAL
                                                                                                                     (CALCD.)
               SUBM     CACO3          CO3         HCO3            CL           SO4            F           SIO2         CACO3
                ID      MG/L          MG/L        MG/L            MG/L          MG/L          MG/L          MG/L          MG/L
 SAMPLES(FLAGS)         21(0)         19(2)        19(2)         21(4)         21(0)         21(0)         21(0)         20(0)
            LOW           117.           0.         143.          L0.            20.          .11           2.1          114.
           HIGH           153.          Q5.         187.           6.0           51.          .18           5.8          161.
        AVERAGE           133.           1.*        161.*          2.8*          39.          .15           3.9          149.
       STD.DEV.             8.           2.*         12.*          1.4*           9.          .02           1.0           12.
    PERCNT:10TH           126.           0.         145.          L0.            25.          .13           3.2          134.
           25TH           128.           0.         154.           2.            35.          .14           3.5          142.
    MEDIAN 50TH           133.           0.         160.           3.            40.          .15           3.8          152.
           75TH           138.           0.         168.           4.            44.          .16           4.3          158.
           90TH           142.          Q5.         179.           4.            47.          .16           5.2          160.
 SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  17                         NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                             SURFACE WATER DATA
STATION 00AL05EB2373    LAT. 53D 42M 47S  LONG. 113D 14M 20S   PR 3   UTM 12 352250E 5953700N  FOR MAY 18, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     ABOVE FORT SASK. RAILWAY TRESTLE
 90M UPSTREAM

                          20110L       12102L       11103L       19103L       15406L       15419L       07403L       07602L
                         CALCIUM     MAGNESIUM      SODIUM     POTASSIUM   PHOSPHOROUS   PHOSPHORUS    NITROGEN     NITROGEN
                        DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL        TOTAL     TOTAL ORG.      TOTAL
                                                                            PHOSPHATE    PHOSPHATE    (CALCD.)     (CALCD.)
                  SUBM     CA           MG           NA           K            P            P            N            N
                   ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L        MG/L
SAMPLES(FLAGS)           21(0)        20(0)        21(0)        21(0)         8(0)        11(0)                     21(5)
           LOW             34.           7.           3.           .7         .029         .084                      .410
          HIGH             48.         13.0          11.          2.4         .232         .300                     1.920
       AVERAGE             41.         11.3          7.3          1.2         .125         .175                      .914*
      STD.DEV.              3.          1.5          2.3           .4         .063         .082                      .369*
  PERCNT:10TH              37.         10.0           4.           .9                      .084                     Q.550
          25TH             40.         10.5           6.           .9         .090         .108                      .700
   MEDIAN 50TH             41.         12.0          7.0          1.1         .118         .148                     Q.800
          75TH             43.         12.0           9.          1.2         .163         .280                     1.130
          90TH             44.         13.0          10.          1.9                      .280                     1.280
SECONDARY CODE                                                                          21L

                          07021L       07503L       07562L       07205L       07206L       07105L       07906L       10407L
                         NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     RESIDUE
                          TOTAL        TOTAL      DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED   PARTICULATE NONFILTRABLE
                         KJELDAHL     AMMONIA      AMMONIA      NITRITE      NITRITE    NO3 & NO2      TOTAL
                  SUBM      N            N            N            N            N            N            N
                   ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)           21(4)        10(8)        11(0)        21(13)       10(4)        21(2)        13(4)        14(0)
           LOW             .260          L.4         .056         L.05        L.007         L.05         L.01           8.
          HIGH            1.400          1.4         .860          .25         .084          .52         1.79         134.
       AVERAGE             .699*        .50*         .414         .073*        .025*        .215*        .208*         31.
      STD.DEV.             .279*        .32*         .281         .046*        .028*        .133*        .481*         33.
  PERCNT:10TH             L.5          L.40         .063         L.05        L.007          .07         L.01           8.
          25TH            L.5          L.4          .200         L.05        L.007          .10        L.010          11.
   MEDIAN 50TH             .6          L.40         .420         L.05         .013          .19          .07          19.
          75TH             .9          L.4          .660          .08         .021          .30          .11          37.
          90TH            1.020          .90         .770          .10         .076          .35          .24          55.
SECONDARY CODE           01L

                          10474L       10453L       00205L       36001L       36011L       36102L       36910L       29009L
                         RESIDUE      RESIDUE       TOTAL      COLIFORMS    COLIFORMS     STREP.     STD. PLATE     COPPER
                          TOTAL      FILTRABLE    DISSOLVED      TOTAL        FECAL        FECAL       COUNT        TOTAL
                                                   SOLIDS                                           BACT.DENS.
                  SUBM                                          MPN          MPN           MF                       CU
                   ID     MG/L         MG/L         MG/L       NO/100ML     NO/100ML     NO/100ML      NO/ML        MG/L
SAMPLES(FLAGS)           14(0)        14(0)        21(0)        19(0)        19(0)        19(0)        17(0)        21(6)
           LOW             251.         200.         137.        2000.         130.          20.          30.        L.001
          HIGH             334.         320.         210.       37000.       19000.        1300.       23000.         .022
       AVERAGE             288.         256.         183.        9842.        3069.         285.        5866.         .003*
      STD.DEV.              29.          33.          17.        8783.        5378.         321.        6073.         .004*
  PERCNT:10TH              258.         220.         164.        2000.         230.          20.         440.        L.001
          25TH             262.         230.         175.        4100.         420.          90.        1900.        L.001
   MEDIAN 50TH             279.         250.         185.        5800.        1100.         140.        4400.         .002
          75TH             307.         290.         195.       13000.        3100.         430.        5600.         .003
          90TH             328.         290.         202.       22000.       17000.         760.       13000.         .004
SECONDARY CODE                                               02L          12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  18                         NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                        SURFACE WATER DATA
STATION 00AL05EB2373    LAT. 53D 42M 47S  LONG. 113D 14M 20S   PR 3   UTM 12 352250E 5953700N  FOR MAY 18, 1982 TO FEB 29, 1984
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     ABOVE FORT SASK. RAILWAY TRESTLE
 90M UPSTREAM
                        30009L      26304L      13306L      25003L      28009L      42009L      27009L      33005L
                         ZINC        IRON      ALUMINUM   MANGANESE     NICKEL    MOLYBDENUM    COBALT     ARSENIC
                         TOTAL     EXTRBLE.    EXTRBLE.     TOTAL       TOTAL       TOTAL       TOTAL      TOTAL

                 SUBM     ZN          FE          AL          MN          NI          MO          CO          AS
                  ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           21(0)       21(0)       17(0)       18(0)       21(3)       17(15)      21(20)      13(2)
           LOW            .003         .05        .050        .009       L.001       L.001       L.001      L.0002
          HIGH            .064        2.24       4.600        .093        .011        .007        .003       .0023
       AVERAGE            .023         .47        .558        .030        .005*       .002*       .001*      .0006*
      STD.DEV.            .022         .53       1.084        .027        .003*       .002*       .000*      .0006*
  PERCNT:10TH             .004         .06        .050        .010       L.001       L.001       L.001      L.0002
          25TH            .005         .12        .138        .011        .004       L.001       L.001       .0003
   MEDIAN 50TH            .013         .26        .224        .017        .005       L.001       L.001       .0004
          75TH            .033         .62        .384        .038        .006       L.001       L.001       .0008
          90TH            .061         .77       1.110        .085        .008        .005       L.001       .0009
SECONDARY CODE
                        04304L      48009L      24009L      82302L      82009L      80015L      34005L      23009L
                       BERYLLIUM    CADMIUM    CHROMIUM      LEAD        LEAD       MERCURY    SELENIUM    VANADIUM
                        EXTRBLE.     TOTAL       TOTAL      EXTRBLE.     TOTAL       TOTAL      TOTAL        TOTAL

                 SUBM     BE          CD          CR          PB          PB          HG          SE          V
                  ID     MG/L        MG/L        M3/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           17(17)      21(18)      21(6)        9(6)       10(5)       11(11)      13(11)      17(8)
           LOW           L.001       L.001       L.001       L.003       L.003       L.0001      L.0002      L.002
          HIGH           L.001        .002        .027        .008        .072       L.0001       .0006       .013
       AVERAGE                        .001*       .005*       .004*       .011*                   .0003*      .004*
      STD.DEV.                        .000*       .006*       .002*       .021*                   .0001*      .003*
  PERCNT:10TH            L.001       L.001       L.001                   L.003       L.0001      L.0002      L.002
          25TH           L.001       L.001       L.001       L.003       L.003       L.0001      L.0002      L.002
   MEDIAN 50TH           L.001       L.001        .004       L.003        .004*      L.0001      L.0002       .003
          75TH           L.001       L.001        .006        .004        .007       L.0001      L.0002       .005
          90TH           L.001        .002        .008                    .040       L.0001       .0305       .008
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  19                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                    SURFACE WATER DATA
STATION 00AL05EB2441    LAT. 53D 46M 32S  LONG. 113D  9M 30S   PR 3   UTM 12 357800E 5960500N  FOR MAY 18, 1982 TO OCT 20, 1982
 NORTH SASKATCHEWAN RIVER     LEFT BANK      DOWNSTREAM OF STURGEON RIVER
 AT NGL PIPELINE CROSSING

                      97251F         02065F       08102F        02042F         02041L        10301L        08202L        08301L
                      DEPTH OF     TEMPERATURE    OXYGEN       SPECIFIC      SPECIFIC         PH          OXYGEN        OXYGEN
                      SAMPLING        WATER      DISSOLVED     CONDUCT.      CONDUCT.                    BIOCHEM.      TOTAL COD
                                                                                                        DEMAND-BOD
               SUBM  FROM SURF.                    02                                                       02            02
                ID       M           DEG.C        MG/L         USIE/CM         US/CM       PH UNITS        MG/L         MG/L
SAMPLES(FLAGS)           11(0)         11(0)        11(0)         11(0)         11(0)         11(0)         10(2)        11(0)
           LOW             1.5           4.5          7.3          320.          278.           7.8           L.3          11.
          HIGH             2.7           21.         13.4          500.          452.           8.5           3.4          56.
       AVERAGE             2.0          15.9          9.8          394.          363.                         1.7*        26.5
      STD.DEV.              .3           5.3          1.9           53.           48.                         1.1*        12.5
   PERCNT:10TH             1.7           7.5          8.4          340.          306.           7.8           L.3          15.
          25TH             1.7           15.          8.5          345.          324.           7.9            .8          21.
   MEDIAN 50TH             1.8          17.5          9.4          390.          365.           8.0           1.4          24.
          75TH             2.1           20.         12.0          430.          382.           8.2           2.7          26.
          90TH             2.4          20.5         12.5          430.          410.           8.4           3.2          42.
SECONDARY CODE

                       06536L        06005L        06154L       06107L        06905L        06715L        06721L        10151L
                      PHENOLIC       CARBON        CARBON       CARBON        CARBON       CHLORO -     CHLOROPHYLL   ALKALINITY
                      MATERIAL        TOTAL       DISSOLVED    DISSOLVED    PARTICULATE    PHYLL A          -A-         PHENOL
                       PHENOL       ORGANIC       INORGANIC    ORGANIC         TOTAL                     EPILITHON    PHTHALEIN
               SUBM                   C              C            C             C                                       CACO3
                ID      MG/L          MG/L          MG/L         MG/L          MG/L           MG/M3         MG/M2        MG/L
SAMPLES(FLAGS)          11(10)          9(0)                                                                             11(1)
           LOW           L.002            8.                                                                                .0
          HIGH            .002           18.                                                                              L4.2
       AVERAGE            .002*         13.2                                                                                .4*
      STD.DEV.            .000*          3.5                                                                               1.3*
   PERCNT:10TH           L.002                                                                                              .0
          25TH           L.002          11.4                                                                                .0
   MEDIAN 50TH           L.002           12.                                                                                0.
          75TH           L.002          15.6                                                                                0.
          90TH           L.002                                                                                              0.
SECONDARY CODE

                        10101L       06301L        06201L        17203L        16306L       09107L       14102L         10602L
                     ALKALINITY     CARBONATE    BICARBONT.     CHLORIDE       SULPHATE     FLUORIDE     SILICA        HARDNESS
                        TOTAL       (CALCD.)      (CALCD.)      DISSOLVED      DISSOLVED    DISSOLVED    REACTIVE         TOTAL
                                                                                                                       (CALCD.)
               SUBM     CACO3          CO3         HCO3            CL           SO4              F          SIO2         CACO3
                ID      MG/L          MG/L       MG/L            MG/L          MG/L          MG/L          MG/L         MG/L
SAMPLES(FLAGS)           11(0)         11(1)         11(1)        11(3)          11(0)         11(0)        11(0)         11(0)
           LOW            117.            0.          143.          L0.            20.           .13          2.4          116.
          HIGH            172.           Q5.          210.           5.            47.           .16          5.3          167.
       AVERAGE            146.            0.*         176.*         2.5*           34.           .15          3.9          149.
      STD.DEV.             17.            2.*          20.*         1.4*            8.           .01           .9           14.
   PERCNT:10TH            121.            0.          147.          L0.            25.           .13          3.0          136.
          25TH            135.            0.          165.          L0.            30.           .14          3.2          144.
   MEDIAN 50TH            151.            0.          180.           2.            35.           .15          3.8          149.
          75TH            155.            0.          189.           3.            40.           .16          4.5          160.
          90TH            160.            0.          195.           5.            40.           .16          5.2          164.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  20                   NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                       SURFACE WATER DATA
STATION 00AL05EB2441    LAT. 53D 46M 32S  LONG. 113D  9M 30S   PR 3   UTM 12 357800E 5960500N  FOR MAY 18, 1982 TO OCT 20, 1982
 NORTH SASKATCHEWAN RIVER     LEFT BANK     DOWNSTREAM OF STURGEON RIVER
 AT NGL PIPELINE CROSSING
                          20110L       12102L       11103L       19103L       15406L       15419L       07403L       07602L
                          CALCIUM     MAGNESIUM     SODIUM      POTASSIUM   PHOSPHOROUS   PHOSPHORUS    NITROGEN     NITROGEN
                         DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED     TOTAL        TOTAL      TOTAL ORG.     TOTAL
                                                                            PHOSPHATE    PHOSPHATE    (CALCD.)     (CALCD.)
                 SUBM       CA           MG           NA           K            P            P            N            N
                  ID       MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            11(0)        11(0)        11(0)        11(0)         9(0)         5(0)        11(11)       11(8)
           LOW               35.           7.           4.          1.0         .018         .068       Q.100        Q.550
          HIGH               47.          12.          22.          7.5         .141         .098       Q.800        Q1.250
       AVERAGE               42.          10.8         11.1         2.9         .087         .078                     .707*
      STD.DEV.                4.           1.5          5.4         1.9         .036         .012                     .221*
  PERCNT:10TH                38.          10.           4.          1.1                                Q.100        Q.550
          25TH               40.          10.           8.          1.4          .07         .070       Q.100        Q.550
   MEDIAN 50TH               41.          11.          11.          2.8         .083         .077       Q.200        Q.650
          75TH               46.          12.          14.          4.0         .102         .079       Q.200         .700
          90TH               46.          12.          18.          4.0                                 Q.500        1.000
SECONDARY CODE                                                                             21L
                          07021L       07503L       07562L       07205L       07206L       07105L       07906L       10407L
                         NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     RESIDUE
                          TOTAL        TOTAL      DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED   PARTICULATE  NONFILTRABLE
                         KJELDAHL     AMMONIA      AMMONIA      NITRITE      NITRITE     NO3 & NO2      TOTAL
                 SUBM       N            N            N            N            N            N            N
                  ID       MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            11(1)        11(11)        5(1)        11(10)       11(6)        11(8)                      4(0)
           LOW              .360         L.4        L.002         L.05        L.007         L.05                       14.
          HIGH             1.2           L.4         .115          .07         .016          .10                       22.
       AVERAGE              .625*                    .070*        .052*        .009*        .062*                      18.
      STD.DEV.              .216*                    .042*        .006*        .003*        .021*                       3.
  PERCNT:10TH              L.5           L.4                      L.05        L.007         L.05
          25TH              .5           L.4         .062         L.05        L.007         L.05                       16.
   MEDIAN 50TH              .6           L.4         .084         L.05        L.007         L.05                       17.
          75TH              .680         L.4         .087         L.05         .012          .08                       20.
          90TH              .740         L.4                      L.05         .014          .10
SECONDARY CODE           01L
                          10474L       10453L       00205L       36001L       36011L       36102L       36910L       29009L
                          RESIDUE      RESIDUE       TOTAL      COLIFORMS    COLIFORMS     STREP.     STD. PLATE     COPPER
                           TOTAL      FILTRABLE    DISSOLVED      TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                    SOLIDS                                            BACT.DENS.
                                                                  MPN          MPN           MF                      CU
                 SUBM                                                                                               MG/L
                  ID       MG/L         MG/L         MG/L      NO/100ML     NO/100ML     NO/100ML      NO/ML        11(1)
SAMPLES(FLAGS)             4(0)         4(0)        11(0)        11(0)        11(0)        11(0)         9(0)       L.001
           LOW              304.         290.         138.          20.          10.          28.          70.        .005
          HIGH              342.         320.         237.        8500.         510.         300.        3600.        .003*
       AVERAGE              323.         305.         191.        3502.         349.         108.        1580.        .001*
      STD.DEV.               16.          13.          27.        2657.         150.          81.        1301.        .002
  PERCNT:10TH                                         162.        1000.         250.          30.                     .002
          25TH              311.         295.         174.        1200.         250.          44.         710.        .003
   MEDIAN 50TH              322.         305.         191.        3000.         420.          90.        1200.        .004
          75TH              335.         315.         207.        5200.         450.         150.        2400.        .004
          90TH                                        212.        7600.         510.         160.
SECONDARY CODE                                                  02L          12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  21                        NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                          SURFACE WATER DATA
STATION 00AL05EB2441    LAT. 53D 46M 32S  LONG. 113D  9M 30S   PR 3   UTM 12 357800E 5960500N  FOR MAY 18, 1982 TO OCT 20, 1982
 NORTH SASKATCHEWAN RIVER     LEFT BANK     DOWNSTREAM OF STURGEON RIVER
 AT NGL PIPELINE CROSSING

                          30009L       26304L       13306L       25003L       28009L       42009L       27009L       33005L
                           ZINC         IRON       ALUMINUM    MANGANESE      NICKEL     MOLYBDENUM     COBALT      ARSENIC
                          TOTAL       EXTRBLE.     EXTRBLE.      TOTAL        TOTAL        TOTAL        TOTAL       TOTAL

                  SUBM     ZN           FE           AL           MN           NI           MO           CO           AS
                   ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            11(0)        11(0)         7(0)         8(0)        11(1)         7(6)        11(10)        6(1)
           LOW             .006          .06         .346         .013        L.001        L.001        L.001       L.0002
          HIGH             .064         1.78        5.120         .115         .010         .005         .003        .0012
       AVERAGE             .025          .50        1.170         .037         .006*        .002*        .001*       .0009*
      STD.DEV.             .016          .50        1.756         .034         .003*        .002*        .001*       .0004*
   PERCNT:10TH             .014          .12                                   .003                     L.001
          25TH             .014          .15         .361         .019         .004        L.001        L.001        .0007
   MEDIAN 50TH             .023          .31         .455         .019         .005        L.001        L.001        .0010
          75TH             .031          .56        1.000         .045         .009        L.001        L.001        .0012
          90TH             .034         1.00                                   .009                     L.001
SECONDARY CODE

                          04304L       48009L       24009L       82302L       82009L       80015L       34005L       23009L
                        BERYLLIUM     CADMIUM     CHROMIUM       LEAD         LEAD        MERCURY     SELENIUM     VANADIUM
                         EXTRBLE.      TOTAL        TOTAL      EXTRBLE.      TOTAL        TOTAL       TOTAL         TOTAL

                  SUBM     BE           CD           CR           PB           PB           HG           SE            V
                   ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             7(7)        11(11)       11(0)                     11(8)                      6(4)         7(3)
           LOW            L.001        L.001         .003                    L.003                     L.0002        L.002
          HIGH            L.001        L.001         .009                     .006                      .0004         .015
       AVERAGE                                       .006                     .003*                     .0002*        .005*
      STD.DEV.                                       .001                     .001*                     .0001*        .005*
   PERCNT:10TH                         L.001         .005                    L.003
          25TH            L.001        L.001         .005                    L.003                     L.0002        L.002
   MEDIAN 50TH            L.001        L.001         .006                    L.003                     L.0002         .003
          75TH            L.001        L.001         .006                     .004                      .0003         .006
          90TH                         L.001         .007                     .004
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  22                          NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                          SURFACE WATER DATA
STATION 00AL05EB2442     LAT. 53D 46M 30S  LONG. 113D  9M 25S   PR 3   UTM 12 357850E 5960450N  FOR MAY 18, 1982 TO OCT 20, 1982
 NORTH SASKATCHEWAN RIVER         CENTRE      DOWNSTREAM OF STURGEON RIVER
 AT NGL PIPELINE CROSSING
                             97251F       02065F       08102F       02042F       02041L       10301L       08202L       08301L
                            DEPTH OF    TEMPERATURE    OXYGEN      SPECIFIC     SPECIFIC        PH          OXYGEN       OXYGEN
                            SAMPLING       WATER      DISSOLVED    CONDUCT.     CONDUCT.                   BIOCHEM.    TOTAL COD
                                                                                                          DEMAND-BOD
                     SUBM  FROM SURF.                    02                                                   02           02
                      ID       M          DEG.C         MG/L       USIE/CM       US/CM      PH UNITS        MG/L         MG/L
SAMPLES(FLAGS)               11(0)        11(0)        11(0)        11(0)        11(0)        11(0)        11(1)        11(0)
           LOW                 1.5          4.5          7.4         310.         274.          8.0          L.3          4.5
          HIGH                 3.4          21.         12.6         430.         374.          8.5          2.8          26.
       AVERAGE                 2.5         14.8          9.5         371.         331.                       1.6*        13.3
      STD.DEV.                  .5          5.3          1.7          38.          30.                        .9*         5.6
  PERCNT:10TH                  2.1          7.6          8.1         335.         292.          8.0           .7          7.7
          25TH                 2.4          9.5          8.3  3[illegible].         318.          8.0           .8          11.
   MEDIAN 50TH                 2.4         16.5          8.7         370.         332.          8.1          1.6          13.
          75TH                 2.9         18.5         10.7         410.         356.          8.3          2.4          16.
          90TH                 3.0          20.         11.9         410.         357.          8.4          2.8          18.
SECONDARY CODE

                             06536L       06005L       06154L       06107L       06905L       06715L       06721L       10151L
                            PHENOLIC      CARBON       CARBON       CARBON       CARBON      CHLORO -   CHLOROPHYLL   ALKALINITY
                            MATERIAL      TOTAL      DISSOLVED    DISSOLVED   PARTICULATE    PHYLL A        -A-         PHENOL
                             PHENOL      ORGANIC     INORGANIC     ORGANIC       TOTAL                   EPILITHON    PHTHALEIN
                     SUBM                   C            C            C            C                                   CACO3
                      ID      MG/L         MG/L         MG/L         MG/L         MG/L        MG/M3        MG/M2         MG/L
SAMPLES(FLAGS)               11(10)        9(0)                                                                      11(2)
           LOW                L.002          6.                                                                          .0
          HIGH                 L.02         10.9                                                                        L4.2
       AVERAGE                .004*          8.3                                                                         .8*
      STD.DEV.                .005*          1.4                                                                        1.7*
  PERCNT:10TH                 L.002                                                                                      .0
          25TH                L.002          7.5                                                                         .0
   MEDIAN 50TH                L.002          8.3                                                                         .0
          75TH                L.002           9.                                                                         0.
          90TH                 .002                                                                                     L4.2
SECONDARY CODE

                             10101L       06301L       06201L       17203L       16306L       09107L       14102L       10602L
                           ALKALINITY   CARBONATE    BICARBONT.    CHLORIDE     SULPHATE     FLUORIDE      SILICA      HARDNESS
                              TOTAL      (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED    DISSOLVED     REACTIVE       TOTAL
                                                                                                                      (CALCD.)
                     SUBM     CACO3        CO3        HCO3           CL          SO4            F          SIO2         CACO3
                      ID      MG/L         MG/L       MG/L          MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)               11(0)        11(2)        11(2)        11(5)        11(0)        11(0)        11(0)        11(0)
           LOW                 116.          0.        Q134.          L0.          20.          .12          3.2         114.
          HIGH                 150.         Q5.         180.           3.          40.          .15          5.4         165.
       AVERAGE                 134.          1.*        162.*         1.6*         30.          .14          4.1         147.
      STD.DEV.                  11.          2.*         14.*          .7*          8.          .01           .7          17.
  PERCNT:10TH                  118.          0.         141.          L0.          20.          .14          3.2         122.
          25TH                 127.          0.         155.          L0.          20.          .14          3.5         139.
   MEDIAN 50TH                 135.          0.         165.           2.          30.          .14          4.1         151.
          75TH                 145.          0.        Q173.           2.          35.          .15          4.3         161.
          90TH                 148.         Q5.         177.           2.          40.          .15          5.2         164.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  23                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                      SURFACE WATER DATA
STATION 00AL05EB2442    LAT. 53D 46M 30S  LONG. 113D  9M 25S   PR 3   UTM 12 357850E 5960450N  FOR MAY 18, 1982 TO OCT 20, 1982
 NORTH SASKATCHEWAN RIVER        CENTRE     DOWNSTREAM OF STURGEON RIVER
 AT NGL PIPELINE CROSSING

                          20110L       12102L       11103L       19103L       15406L       15419L       07403L       07602L
                         CALCIUM     MAGNESIUM     SODIUM     POTASSIUM   PHOSPHOROUS   PHOSPHORUS    NITROGEN     NITROGEN
                        DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED     TOTAL        TOTAL      TOTAL ORG.     TOTAL
                                                                           PHOSPHATE    PHOSPHATE     (CALCD.)     (CALCD.)
                   SUBM     CA           MG           NA           K            P            P            N            N
                    ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            11(0)        11(0)        11(0)        11(0)         9(0)         5(0)        11(9)        11(5)
           LOW              34.           7.           2.           .6         .021         .089        Q.100        Q.550
          HIGH              48.          13.           8.          1.3         .123         .117        Q.400        1.050
       AVERAGE              41.         10.5          5.5          1.0         .092         .101         .236*        .750*
      STD.DEV.               4.          1.7          1.9           .2         .030         .012         .129*        .196*
  PERCNT:10TH               34.           9.           3.           .8                                 Q.100        Q.550
          25TH              39.          10.           4.           .9         .094         .094        Q.100        Q.550
    MEDIAN 50TH             43.          10.           6.          1.0         .099         .094        Q.200         .700
          75TH              44.          12.           7.          1.1         .111         .109        Q.400         .900
          90TH              46.          12.           7.          1.2                                  Q.400        1.020
SECONDARY CODE                                                                              21L

                          07021L       07503L       07562L       07205L       07206L       07105L       07906L       10407L
                         NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     RESIDUE
                          TOTAL        TOTAL      DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED   PARTICULATE  NONFILTRABLE
                         KJELDAHL     AMMONIA     AMMONIA      NITRITE      NITRITE     NO3 & NO2      TOTAL
                   SUBM     N            N            N            N            N            N            N
                    ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            11(2)        11(9)         5(0)        11(7)        11(2)        11(5)                      MG/L
           LOW             .380          L.4         .009         L.05        L.007         L.05                      4(0)
          HIGH              .8            .4         .258          .10         .054          .25                       10.
       AVERAGE             .546*         .40*        .180         .060*        .018*        .114*                      27.
      STD.DEV.             .104*         .00*        .101         .016*        .015*        .075*                      19.
  PERCNT:10TH              .480          L.4                      L.05        L.007         L.05                        9.
          25TH              L.5          L.4         .181         L.05         .007         L.05
    MEDIAN 50TH            .540          L.4         .202         L.05         .013          .10                       11.
          75TH              .6           L.4         .248          .07         .026          .18                       19.
          90TH              .6            .4                       .07         .038          .22                       26.
SECONDARY CODE            01L

                          10474L       10453L       00205L       36001L       36011L       36102L       36910L       29009L
                          RESIDUE      RESIDUE      TOTAL      COLIFORMS    COLIFORMS      STREP.    STD. PLATE     COPPER
                          TOTAL      FILTRABLE    DISSOLVED      TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                   SOLIDS                                            BACT.DENS.
                   SUBM                                          MPN          MPN           MF                       CU
                    ID     MG/L         MG/L         MG/L      NO/100ML     NO/100ML     NO/100ML       NO/ML        MG/L
SAMPLES(FLAGS)             4(0)         4(0)        11(0)        11(0)        11(0)        11(0)        10(0)        11(1)
           LOW             252.         240.         137.        1400.         560.          48.         240.        L.001
          HIGH             307.         290.         201.       11000.        2100.         400.        5200.         .005
       AVERAGE             286.         268.         171.        7309.        1053.         190.        1915.         .003*
      STD.DEV.              24.          22.          18.        3234.         478.         119.        1562.         .001*
  PERCNT:10TH                                        153.        3100.         590.          80.         360.         .002
          25TH             269.         250.         160.        5500.         700.          94.         680.         .002
    MEDIAN 50TH            293.         270.         175.        7500.         990.         150.        1600.         .002
          75TH             304.         285.         182.       11000.        1400.         310.        2500.         .004
          90TH                                       189.       11000.        1500.         330.        4400.         .005
SECONDARY CODE                                                   02L          12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  24                     NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                     SURFACE WATER DATA
STATION 00AL05EB2442    LAT. 53D 46M 30S  LONG. 113D  9M 25S   PR 3   UTM 12 357850E 5960450N  FOR MAY 18, 1982 TO OCT 20, 1982
 NORTH SASKATCHEWAN RIVER       CENTRE     DOWNSTREAM OF STURGEON RIVER
 AT NGL PIPELINE CROSSING

                       30009L        26304L        13306L        25003L        28009L        42009L        27009L       33005L
                        ZINC          IRON         ALUMINUM     MANGANESE      NICKEL     MOLYBDENUM      COBALT       ARSENIC
                       TOTAL         EXTRBLE.      EXTRBLE.      TOTAL         TOTAL         TOTAL         TOTAL       TOTAL

               SUBM      ZN            FE            AL            MN            NI            MO            CO           AS
                ID      MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L         MG/L
SAMPLES(FLAGS)           11(0)         11(0)          7(0)          8(1)         11(0)          7(6)        11(10)          6(1)
           LOW            .002           .06          .119         L.008          .003         L.001         L.001        L.0002
          HIGH            .043          2.11         5.390          .100          .009          .004          .003         .0011
       AVERAGE            .022           .46         1.284          .032*         .005          .001*         .001*        .0006*
      STD.DEV.            .013           .58         1.894          .031*         .002          .001*         .001*        .0004*
   PERCNT:10TH            .009           .08                                      .004                       L.001
          25TH            .011           .16          .250          .010          .004         L.001         L.001         .0003
   MEDIAN 50TH            .021           .29          .478          .019          .005         L.001         L.001         .0004
          75TH            .033           .55         1.780          .045          .007         L.001         L.001         .0009
          90TH            .034           .66                                      .007                       L.001
SECONDARY CODE
                       04304L        48009L        24009L        82302L        82009L        80015L        34005L       23009L
                       BERYLLIUM    CADMIUM       CHROMIUM        LEAD          LEAD        MERCURY       SELENIUM     VANADIUM
                        EXTRBLE.     TOTAL         TOTAL        EXTRBLE.       TOTAL         TOTAL       TOTAL           TOTAL

               SUBM      BE            CD            CR            PB            PB           HG             SE           V
                ID      MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L         MG/L
SAMPLES(FLAGS)            7(7)         11(9)         11(0)                       11(8)                        6(5)          7(2)
           LOW           L.001         L.001          .003                       L.003                      L.0002         L.002
          HIGH           L.001          .003          .009                        .004                       .0004          .014
       AVERAGE                          .001*         .006                        .003*                      .0002*         .005*
      STD.DEV.                          .001*         .002                        .000*                      .0001*         .004*
   PERCNT:10TH                         L.001          .004                       L.003
          25TH           L.001         L.001          .005                       L.003                      L.0002         L.002
   MEDIAN 50TH           L.001         L.001          .006                       L.003                      L.0002          .003
          75TH           L.001         L.001          .007                        .004                      L.0002          .007
          90TH                          .002          .007                        .004
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  25                        NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                        SURFACE WATER DATA
STATION 00AL05EB2443    LAT. 53D 46M 28S  LONG. 113D  9M 21S   PR 3   UTM 12 357950E 5960350N  FOR MAY 18, 1982 TO OCT 20, 1982
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     DOWNSTREAM OF STURGEON RIVER
 AT NGL PIPELINE CROSSING

                           97251F       02065F      08102F      02042F      02041L      10301L      08202L      08301L
                          DEPTH OF   TEMPERATURE    OXYGEN     SPECIFIC    SPECIFIC       PH        OXYGEN      OXYGEN
                          SAMPLING      WATER     DISSOLVED    CONDUCT.    CONDUCT.                BIOCHEM.   TOTAL COD
                                                                                                  DEMAND-BOD
                   SUBM  FROM SURF.                   O2                                              O2          O2
                    ID       M         DEG.C         MG/L      USIE/CM      US/CM      PH UNITS      MG/L        MG/L
SAMPLES(FLAGS)             11(0)       11(0)        11(0)       11(0)       10(0)       10(0)        11(0)       11(0)
           LOW                .6         4.5          6.8        290.        278.         7.7           .6         6.7
          HIGH               2.4        21.5         12.6        483.        412.         8.3          4.2         26.
       AVERAGE               1.4        15.8          9.3        391.        356.                      2.5        14.7
      STD.DEV.                .7         5.2          1.8         54.         37.                      1.3         5.1
   PERCNT:10TH                .6          8.          7.8        350.        302.         7.7          1.4         10.
          25TH                .9        14.5          7.8        355.        339.         7.8          1.4         12.
   MEDIAN 50TH               1.2         17.          8.7        390.        356.         7.8          1.9         14.
          75TH               2.1        19.5         11.2        430.        382.         8.0          3.8         17.
          90TH               2.1         20.         11.5        445.        400.         8.2          4.1         20.
SECONDARY CODE

                           06536L      06005L      06154L      06107L      06905L      06715L       06721L      10151L
                          PHENOLIC     CARBON      CARBON      CARBON      CARBON     CHLORO -   CHLOROPHYLL  ALKALINITY
                          MATERIAL     TOTAL     DISSOLVED   DISSOLVED  PARTICULATE   PHYLL A        -A-        PHENOL
                           PHENOL     ORGANIC    INORGANIC    ORGANIC      TOTAL                  EPILITHON   PHTHALEIN
                   SUBM                  C           C           C           C                                 CACO3
                    ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/M3        MG/M2       MG/L
SAMPLES(FLAGS)             11(10)      10(0)                                                                    10(0)
           LOW             L.002         5.                                                                        .0
          HIGH              .003        12.                                                                       0.
       AVERAGE              .002*       9.6                                                                        .0
      STD.DEV.              .000*       2.3                                                                        .0
   PERCNT:10TH             L.002        6.2                                                                        .0
          25TH             L.002        8.2                                                                        .0
   MEDIAN 50TH             L.002       10.2                                                                        .0
          75TH             L.002       11.7                                                                       0.
          90TH             L.002       12.0                                                                        .0
SECONDARY CODE

                           10101L      06301L      06201L      17203L      16306L      09107L       14102L      10602L
                         ALKALINITY  CARBONATE   BICARBONT.   CHLORIDE    SULPHATE    FLUORIDE      SILICA     HARDNESS
                           TOTAL      (CALCD.)     (CALCD.)  DISSOLVED   DISSOLVED   DISSOLVED    REACTIVE      TOTAL
                                                                                                              (CALCD.)
                   SUBM     CACO3        CO3        HCO3         CL         SO4          F           SIO2        CACO3
                    ID      MG/L        MG/L       MG/L         MG/L        MG/L        MG/L         MG/L        MG/L
SAMPLES(FLAGS)             10(0)       10(0)        10(0)       10(1)       10(0)       10(0)        10(0)       10(0)
           LOW              116.          0.         141.         L0.         20.         .14          2.8        119.
          HIGH              151.          0.         184.          8.         45.         .20          5.5        178.
       AVERAGE              136.          0.         165.         4.4*        33.         .16          4.1        154.
      STD.DEV.               10.          0.          12.         2.2*         8.         .02           .8         18.
   PERCNT:10TH              122.          0.         149.         1.5*        23.         .14          3.0        130.
          25TH              130.          0.         158.          3.         25.         .15          3.5        144.
   MEDIAN 50TH              136.          0.         165.         5.0         33.         .16          4.2        153.
          75TH              143.          0.         174.          5.         40.         .16          4.5        168.
          90TH              149.          0.         181.         7.5         43.         .19          5.3        175.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  26                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                       SURFACE WATER DATA
STATION 00AL05EB2443    LAT. 53D 46M 28S  LONG. 113D  9M 21S   PR 3   UTM 12 357950E 5960350N  FOR MAY 18, 1982 TO OCT 20, 1982
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     DOWNSTREAM OF STURGEON RIVER
 AT NGL PIPELINE CROSSING

                         20110L       12102L        11103L       19103L       15406L       15419L       07403L       07602L
                        CALCIUM     MAGNESIUM      SODIUM      POTASSIUM   PHOSPHOROUS  PHOSPHORUS    NITROGEN     NITROGEN
                       DISSOLVED    DISSOLVED     DISSOLVED    DISSOLVED      TOTAL        TOTAL     TOTAL ORG.      TOTAL
                                                                            PHOSPHATE    PHOSPHATE    (CALCD.)     (CALCD.)
                 SUBM     CA           MG            NA            K            P            P            N            N
                  ID     MG/L         MG/L          MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          10(0)        10(0)         10(0)        10(0)         9(0)         5(0)        11(4)        10(2)
           LOW            36.           7.            5.           .9         .036         .109       Q-.300        Q.640
          HIGH            50.          13.           13.          1.5         .299         .310        Q.900        1.900
       AVERAGE            43.         11.1           8.5          1.2         .158         .189        .373*       1.301*
      STD.DEV.             5.          1.9           2.4           .2         .075         .074        .224*        .346*
   PERCNT:10TH            38.          8.5           5.5          1.0                                  Q.100         .760
          25TH            40.          10.            6.          1.1         .111         .163         .200       Q1.200
   MEDIAN 50TH            42.         11.5           9.0          1.2         .176         .169         .300        1.350
          75TH            47.          13.            9.          1.2         .178         .196         .500        1.460
          90TH            50.         13.0          12.0          1.5                                   .600        1.700
SECONDARY CODE                                                                              21L

                         07021L       07503L        07562L       07205L       07206L       07105L       07906L       10407L
                        NITROGEN     NITROGEN      NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN      RESIDUE
                         TOTAL        TOTAL       DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED   PARTICULATE  NONFILTRABLE
                        KJELDAHL     AMMONIA       AMMONIA      NITRITE      NITRITE     NO3 & NO2      TOTAL
                 SUBM      N            N             N            N            N            N            N
                  ID     MG/L         MG/L          MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          11(1)        11(3)          5(0)        10(5)        11(1)        10(0)                      4(0)
           LOW            L.5          L.4          .048         L.05        L.007          .10                       13.
          HIGH          1.600           .8         1.000          .30         .095          .70                       33.
       AVERAGE          .972*         .58*          .576        .112*        .035*         .381                       22.
      STD.DEV.          .360*         .17*          .392        .086*        .030*         .213                       10.
   PERCNT:10TH           .510          L.4                      L.050         .008         .120
          25TH             .7          L.4          .310         L.05         .014          .18                       13.
   MEDIAN 50TH           .960           .6          .676        .075*         .026         .420                       20.
          75TH            1.3           .7          .848          .14         .048          .55                       30.
          90TH          1.400           .8                       .260         .088         .650
SECONDARY CODE          01L

                         10474L       10453L        00205L       36001L       36011L       36102L       36910L       29009L
                        RESIDUE      RESIDUE        TOTAL      COLIFORMS    COLIFORMS      STREP.     STD. PLATE     COPPER
                         TOTAL      FILTRABLE     DISSOLVED      TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                   SOLIDS                                            BACT.DENS.
                 SUBM                                             MPN          MPN           MF                       CU
                  ID     MG/L         MG/L          MG/L       NO/100ML     NO/100ML     NO/100ML       NO/ML        MG/L
SAMPLES(FLAGS)           4(0)         4(0)         10(0)        11(0)        11(0)        11(0)         9(0)        11(2)
           LOW           223.         210.          146.        2300.         580.          24.         400.        L.001
          HIGH           347.         330.          223.       43000.       10000.        3000.       15000.         .024
       AVERAGE           299.         278.          184.       12782.        1987.         525.        6344.        .005*
      STD.DEV.            59.          57.           22.       14674.        2698.         886.        5846.        .007*
   PERCNT:10TH                                      157.        2400.         760.          40.                     L.001
          25TH           253.         230.          170.        4500.         920.          80.        2500.         .002
   MEDIAN 50TH           313.         285.          185.        7300.        1200.         200.        3500.         .003
          75TH           345.         325.          197.       10000.        1600.         490.       13000.         .005
          90TH                                      212.       41000.        2000.        1200.                      .008
SECONDARY CODE                                               02L          12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  27                       NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                        SURFACE WATER DATA
STATION 00AL05EB2443    LAT. 53D 46M 28S  LONG. 113D  9M 21S   PR 3   UTM 12 357950E 5960350N  FOR MAY 18, 1982 TO OCT 20, 1982
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     DOWNSTREAM OF STURGEON RIVER
 AT NGL PIPELINE CROSSING

                          30009L      26304L      13306L      25003L      28009L      42009L      27009L      33005L
                           ZINC        IRON      ALUMINUM   MANGANESE     NICKEL    MOLYBDENUM    COBALT     ARSENIC
                          TOTAL      EXTRBLE.    EXTRBLE.     TOTAL       TOTAL       TOTAL       TOTAL      TOTAL

                  SUBM      ZN          FE          AL          MN          NI          MO          CO          AS
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            11(0)       10(0)        7(0)        8(0)       11(0)        7(6)       11(6)        6(1)
           LOW             .017         .05        .219        .011        .006       L.001       L.001      L.0002
          HIGH             .057         .90       4.300        .107        .105        .004        .006       .0015
       AVERAGE             .037         .30       1.265        .035        .022        .001*       .002*      .0007*
      STD.DEV.             .011         .25       1.601        .032        .028        .001*       .002*      .0006*
   PERCNT:10TH             .027         .06                                .008                   L.001
          25TH             .034         .16        .261        .015        .009       L.001       L.001       .0003
   MEDIAN 50TH             .037         .20        .519        .020        .011       L.001       L.001       .0005
          75TH             .045         .43       2.700        .046        .020       L.001        .003       .0013
          90TH             .048         .68                                .029                    .004
SECONDARY CODE

                          04304L      48009L      24009L      82302L      82009L      80015L      34005L      23009L
                         BERYLLIUM    CADMIUM    CHROMIUM      LEAD        LEAD      MERCURY     SELENIUM    VANADIUM
                          EXTRBLE.     TOTAL       TOTAL     EXTRBLE.      TOTAL       TOTAL      TOTAL        TOTAL

                  SUBM      BE          CD          CR          PB          PB          HG          SE          V
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             7(7)       11(9)       11(0)                   11(7)                    6(5)        7(3)
           LOW            L.001       L.001        .005                   L.003                  L.0002       L.002
          HIGH            L.001        .005        .010                    .050                   .0004        .012
       AVERAGE                         .002*       .007                    .008*                  .0002*       .005*
      STD.DEV.                         .001*       .002                    .014*                  .0001*       .004*
   PERCNT:10TH                        L.001        .005                   L.003
          25TH            L.001       L.001        .006                   L.003                  L.0002       L.002
   MEDIAN 50TH            L.001       L.001        .007                   L.003                  L.0002        .003
          75TH            L.001       L.001        .008                    .006                  L.0002        .010
          90TH                         .003        .008                    .008
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  28                        NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                        SURFACE WATER DATA
STATION 00AL05EB2505    LAT. 53D 50M 45S  LONG. 113D  1M 24S   PR 4   UTM 12 366900E 5968000N  FOR MAY 26, 1983 TO NOV 16, 1983
 REDWATER RIVER  -  MOUTH

                        97251F      02065F      08102F      02042F      02041L      10301L      08202L      08301L
                       DEPTH OF   TEMPERATURE   OXYGEN     SPECIFIC    SPECIFIC       PH        OXYGEN      OXYGEN
                       SAMPLING     WATER      DISSOLVED   CONDUCT.    CONDUCT.                BIOCHEM.   TOTAL COD
                                                                                             DEMAND-BOD
                  SUBM  FROM SURF.               02                                              02          02
                   ID      M        DEG.C       MG/L       USIE/CM      US/CM     PH UNITS      MG/L        MG/L
SAMPLES(FLAGS)           5(0)        9(0)        9(0)        9(0)        9(0)        9(0)        7(0)        9(0)
           LOW             .3         1.5         5.2        450.        396.         7.8         1.6        12.7
          HIGH             .6        23.0        12.2        940.        964.         8.4         3.4        81.5
       AVERAGE             .4        16.4         8.9        671.        607.                     2.6        58.8
      STD.DEV.             .2         6.7         2.2        144.        179.                      .6        23.4
  PERCNT:10TH
          25TH             .3         15.         8.0        590.        475.         7.9         2.4        45.6
   MEDIAN 50TH             .5        19.5         8.9        650.        576.         8.1         2.6        64.7
          75TH             .6        20.5         9.8        700.        664.         8.2         2.9        80.4
          90TH
SECONDARY CODE                                                                                             04L

                        06536L      06005L      06154L      06107L      06905L      06715L      06721L      10151L
                       PHENOLIC     CARBON      CARBON      CARBON      CARBON     CHLORO -  CHLOROPHYLL  ALKALINITY
                       MATERIAL     TOTAL     DISSOLVED   DISSOLVED  PARTICULATE   PHYLL A       -A-        PHENOL
                        PHENOL     ORGANIC    INORGANIC    ORGANIC      TOTAL                 EPILITHON   PHTHALEIN
                  SUBM                C           C           C           C                                CACO3
                   ID    MG/L        MG/L        MG/L        MG/L        MG/L       MG/M3       MG/M2       MG/L
SAMPLES(FLAGS)           9(0)                    9(0)        9(0)        9(1)        9(0)                    9(0)
           LOW           .003                    34.0         4.1        L.01        2.51                      .0
          HIGH           .020                    62.0        31.0        7.41       26.63                     4.2
       AVERAGE           .011                    47.1        19.1        1.97*      12.87                      .5
      STD.DEV.           .005                    10.1         8.1        2.60*       9.97                     1.4
  PERCNT:10TH
          25TH           .009                    39.0        15.0         .33        3.96                      .0
   MEDIAN 50TH           .009                    47.0        20.0         .99        8.30                      .0
          75TH           .014                    55.0        25.0        1.38       23.48                      .0
          90TH
SECONDARY CODE           37L

                        10101L      06301L      06201L      17203L      16306L      09107L      14102L      10602L
                      ALKALINITY  CARBONATE   BICARBONT.   CHLORIDE    SULPHATE    FLUORIDE     SILICA    HARDNESS
                        TOTAL      (CALCD.)    (CALCD.)   DISSOLVED   DISSOLVED   DISSOLVED   REACTIVE      TOTAL
                                                                                                         (CALCD.)
                  SUBM  CACO3        CO3        HCO3          CL         SO4          F          SIO2       CACO3
                   ID    MG/L        MG/L       MG/L         MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           9(0)        9(0)        9(0)        9(0)        9(0)        9(0)        9(0)        9(0)
           LOW           140.          0.        160.          6.         42.         .19          .9        149.
          HIGH           272.          5.        332.         77.        102.         .63        12.5        335.
       AVERAGE           200.          1.        243.        35.7         58.         .27         6.2        221.
      STD.DEV.            44.          2.         55.        28.6         21.         .14         4.6         53.
  PERCNT:10TH
          25TH           176.          0.        215.         13.         42.         .21         2.3        192.
   MEDIAN 50TH           191.          0.        233.         17.         50.         .21         4.4        212.
          75TH           229.          0.        279.         58.         60.         .22        10.4        234.
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  29                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                      SURFACE WATER DATA
STATION 00AL05EB2505    LAT. 53D 50M 45S  LONG. 113D  1M 24S   PR 4   UTM 12 366900E 5968000N  FOR MAY 26, 1983 TO NOV 16, 1983
 REDWATER RIVER  -  MOUTH

                          20110L       12102L       11103L       19103L       15406L       15419L       07403L       07602L
                          CALCIUM      MAGNESIUM    SODIUM       POTASSIUM    PHOSPHOROUS  PHOSPHORUS   NITROGEN     NITROGEN
                          DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    TOTAL        TOTAL        TOTAL ORG.   TOTAL
                                                                              PHOSPHATE    PHOSPHATE    (CALCD.)     (CALCD.)
                    SUBM  CA           MG           NA           K            P            P            N            N
                    ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             9(0)         9(0)         9(0)         9(0)                      9(0)                      9(5)
           LOW              40.          10.          15.          2.0                      .052                      .720
          HIGH              98.          22.          71.          6.6                      .460                     2.580
       AVERAGE              63.          15.1         36.4         5.1                      .216                     1.580*
      STD.DEV.              16.           3.7         18.2         1.7                      .141                      .645*
   PERCNT:10TH
          25TH              54.          13.          21.          4.2                      .106                    Q1.150
   MEDIAN 50TH              62.          14.          30.          5.8                      .190                    Q1.550
          75TH              68.          18.          47.          6.3                      .320                    Q1.750
          90TH
SECONDARY CODE                                                                             21L

                          07021L       07503L       07562L       07205L       07206L       07105L       07906L       10407L
                          NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     RESIDUE
                          TOTAL        TOTAL        DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    PARTICULATE  NONFILTRABLE
                          KJELDAHL     AMMONIA      AMMONIA      NITRITE      NITRITE      NO3 & NO2    TOTAL
                    SUBM  N            N            N            N            N            N            N
                    ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             9(0)                      9(0)         9(9)                      9(5)         9(1)         9(0)
           LOW             .660                     .007         L.05                      L.05         L.01           5.
          HIGH            2.400                     .106         L.05                       .30          .61          54.
       AVERAGE            1.488                     .043                                   .092*        .218*         16.
      STD.DEV.             .587                     .036                                   .082*        .178*         15.
   PERCNT:10TH
          25TH            1.100                     .017         L.05                      L.05          .14          11.
   MEDIAN 50TH            1.500                     .028         L.05                      L.05          .19          12.
          75TH            1.700                     .070         L.05                       .10          .26          13.
          90TH
SECONDARY CODE

                          10474L       10453L       00205L       36001L       36011L       36102L       36910L       29009L
                          RESIDUE      RESIDUE      TOTAL        COLIFORMS    COLIFORMS    STREP.       STD. PLATE   COPPER
                          TOTAL        FILTRABLE    DISSOLVED    TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                    SOLIDS                                              BACT.DENS.
                    SUBM                                         MPN          MPN          MF                        CU
                    ID    MG/L         MG/L         MG/L         NO/100ML     NO/100ML     NO/100ML     NO/ML        MG/L
SAMPLES(FLAGS)             9(0)         9(0)         9(0)         9(0)         9(2)         9(2)         9(0)         9(4)
           LOW             361.         350.         208.          10.          L2.          L2.         390.        L.001
          HIGH             652.         640.         539.         640.         170.         110.       14000.         .037
       AVERAGE             472.         457.         334.         248.         36.*         29.*        3151.         .008*
      STD.DEV.              91.          88.         100.         259.         57.*         41.*        4275.         .012*
   PERCNT:10TH
          25TH             403.         390.         259.          50.           4.           2.         880.        L.001
   MEDIAN 50TH             471.         460.         335.         130.          16.          10.        1800.         .002
          75TH             513.         490.         362.         490.          20.          20.        3000.         .003
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  30                      NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                       SURFACE WATER DATA
STATION 00AL05EB2505    LAT. 53D 50M 45S  LONG. 113D  1M 24S   PR 4   UTM 12 366900E 5968000N  FOR MAY 26, 1983 TO NOV 16, 1983
 REDWATER RIVER  -  MOUTH

                           30009L       26304L       13306L       25003L       28009L       42009L       27009L       33005L
                            ZINC         IRON        ALUMINUM     MANGANESE     NICKEL     MOLYBDENUM     COBALT      ARSENIC
                           TOTAL       EXTRBLE.     EXTRBLE.      TOTAL        TOTAL        TOTAL        TCTAL       TOTAL

                   SUBM     ZN           FE           AL           MN           NI           MO           CO           AS
                    ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)              9(0)         9(0)         9(0)         9(0)         9(1)         8(8)         9(7)        7(0)
           LOW              .002          .11         .030         .029        L.001        L.001        L.001        .0006
          HIGH              .041         1.60         .320         .201         .018        L.001         .003        .0019
       AVERAGE              .010          .57         .091         .103         .008*                     .001*       .0012
      STD.DEV.              .012          .49         .089         .047         .006*                     .001*       .0005
  PERCNT:10TH
          25TH              .004          .24         .050         .078         .005        L.001        L.001        .0008
    MEDIAN 50TH             .007          .34         .055         .103         .007        L.001        L.001        .0010
          75TH              .008          .76         .095         .119         .007        L.001        L.001        .0017
          90TH
SECONDARY CODE

                           04304L       48009L       24009L       82302L       82009L       80015L       34005L       23009L
                          BERYLLIUM     CADMIUM     CHROMIUM       LEAD         LEAD        MERCURY     SELENIUM     VANADIUM
                           EXTRBLE.      TOTAL        TOTAL       EXTRBLE.      TOTAL        TOTAL       TOTAL        TOTAL

                   SUBM     BE           CD           CR           PB           PB           HG           SE           V
                    ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)              9(9)         9(8)         9(3)         8(7)                      9(9)         7(7)         9(3)
           LOW             L.001        L.001        L.001        L.003                     L.0001       L.0002       L.002
          HIGH             L.001         .002         .004         .005                     L.0001       L.0002        .008
       AVERAGE                           .001*        .003*        .003*                                              .003*
      STD.DEV.                           .000*        .001*        .001*                                              .002*
  PERCNT:10TH
          25TH             L.001        L.001        L.001        L.003                     L.0001       L.0002       L.002
    MEDIAN 50TH            L.001        L.001         .003        L.003                     L.0001       L.0002        .003
          75TH             L.001        L.001         .003        L.003                     L.0001       L.0002        .004
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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NAQUADAT SUMMARY REPORT APR 30, 1986
SURFACE WATER DATA

STATION 00AL05EB2510 LAT. 53D 53M 23S LONG. 112D 56M 58S PR 3 UTM 12 371900E 5972800N FOR JUN 29, 1983 TO NOV 16, 1983
BEAVERHILL CREEK - NEAR MOUTH

	SUBM ID	97251F DEPTH OF SAMPLING	02065F TEMPERATURE WATER	08102F OXYGEN DISSOLVED	02042F SPECIFIC CONDUCT.	02041L SPECIFIC CONDUCT.	10301L PH	08202L OXYGEN BIOCHEM. DEMAND-BOD	08301L OXYGEN TOTAL COD
		FROM SURF. M	DEG.C	O2 MG/L	USIE/CM	US/CM	PH UNITS	O2 MG/L	O2 MG/L
SAMPLES(FLAGS)		2(0)	6(0)	6(0)	6(0)	6(0)	6(0)	4(0)	6(0)
LOW		.9	2.0	5.6	310.	313.	7.5	1.1	21.9
HIGH		.9	21.0	12.4	720.	806.	8.2	6.7	121.2
AVERAGE		.9	13.9	7.9	558.	474.		2.9	59.1
STD.DEV.		.0	7.5	2.7	160.	174.		2.6	37.8
PERCNT:10TH									
25TH			7.5	6.2	430.	390.	8.0	1.4	26.7
MEDIAN 50TH		.9	17.0	6.7	595.	413.	8.0	1.9	54.5
75TH			19.	10.0	700.	510.	8.2	4.4	75.8
90TH									
SECONDARY CODE									04L

	SUBM ID	06536L PHENOLIC MATERIAL PHENOL	06005L CARBON TOTAL ORGANIC C	06154L CARBON DISSOLVED INORGANIC C	06107L CARBON DISSOLVED ORGANIC C	06905L CARBON PARTICULATE TOTAL C	06715L CHLORO - PHYLL A	06721L CHLOROPHYLL -A- EPILITHON	10151L ALKALINITY PHENOL PHTHALEIN CACO3
		MG/L	MG/L	MG/L	MG/L	MG/L	MG/M3	MG/M2	MG/L
SAMPLES(FLAGS)		6(0)		6(0)	6(0)	6(0)	6(0)		6(0)
LOW		.003		24.0	5.4	.39	2.32		.0
HIGH		.020		78.0	27.0	8.90	12.31		.0
AVERAGE		.012		46.8	16.7	2.22	7.39		.0
STD.DEV.		.007		18.0	8.8	3.34	4.37		.0
PERCNT:10TH									
25TH		.005		41.0	7.6	.49	3.01		.0
MEDIAN 50TH		.014		42.0	18.1	.70	7.24		.0
75TH		.017		54.0	24.0	2.13	12.21		.0
90TH									
SECONDARY CODE		37L							

	SUBM ID	10101L ALKALINITY TOTAL	06301L CARBONATE (CALCD.)	06201L BICARBONT. (CALCD.)	17203L CHLORIDE DISSOLVED	16306L SULPHATE DISSOLVED	09107L FLUORIDE DISSOLVED	14102L SILICA REACTIVE	10602L HARDNESS TOTAL (CALCD.)
		CACO3 MG/L	CO3 MG/L	HCO3 MG/L	CL MG/L	SO4 MG/L	F MG/L	SIO2 MG/L	CACO3 MG/L
SAMPLES(FLAGS)		6(0)	6(0)	6(0)	6(0)	6(0)	6(0)	6(0)	6(0)
LOW		99.	0.	121.	3.	37.	.15	2.7	86.
HIGH		317.	0.	386.	12.	98.	.24	10.0	337.
AVERAGE		189.	0.	230.	5.3	51.	.19	6.8	184.
STD.DEV.		74.	0.	91.	3.5	23.	.03	3.1	83.
PERCNT:10TH									
25TH		162.	0.	197.	3.	40.	.17	3.2	153.
MEDIAN 50TH		166.	0.	202.	4.0	44.	.18	7.9	173.
75TH		224.	0.	273.	6.	45.	.20	8.8	182.
90TH									
SECONDARY CODE									

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0004 -  0006 PAGE  32                          NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                          SURFACE WATER DATA
STATION 00AL05EB2510    LAT. 53D 53M 23S  LONG. 112D 56M 58S   PR 3   UTM 12 371900E 5972800N  FOR JUN 29, 1983 TO NOV 16, 1983
 BEAVERHILL CREEK -  NEAR MOUTH

                           20110L       12102L       11103L       19103L       15406L       15419L       07403L       07602L
                           CALCIUM      MAGNESIUM    SODIUM       POTASSIUM    PHOSPHOROUS  PHOSPHORUS   NITROGEN     NITROGEN
                           DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    TOTAL        TOTAL        TOTAL ORG.   TOTAL
                                                                               PHOSPHATE    PHOSPHATE    (CALCD.)     (CALCD.)
                   SUBM    CA           MG           NA           K            P            P            N            N
                   ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             6(0)         6(0)         6(0)         6(0)                      6(0)                      6(1)
           LOW              23.          7.          11.           2.0                      .082                      .890
          HIGH              92.         26.          49.           8.2                      .330                     3.250
       AVERAGE              50.         14.5         26.7          5.3                      .209                     1.708*
      STD.DEV.              23.          6.3         13.9          2.5                      .107                      .921*
  PERCNT:10TH
          25TH              43.         11.          13.           2.8                      .108                     1.010
   MEDIAN 50TH              46.         14.0         27.5          6.0                      .216                     1.425
          75TH              48.         15.          32.           7.2                      .300                     2.250
          90TH
SECONDARY CODE                                                                          21L

                           07021L       07503L       07562L       07205L       07206L       07105L       07906L       10407L
                           NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     RESIDUE
                           TOTAL        TOTAL        DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    PARTICULATE  NONFILTRABLE
                           KJELDAHL     AMMONIA      AMMONIA      NITRITE      NITRITE      NO3 & NO2    TOTAL
                   SUBM    N            N            N            N            N            N            N
                   ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             6(0)                      6(0)         6(5)                      6(1)         6(1)         6(0)
           LOW              .740                      .020        L.05                      L.05         L.01          4.
          HIGH             3.100                      .980         .17                       .38          .84        418.
       AVERAGE             1.517                      .282         .070*                     .192*        .283*       88.
      STD.DEV.              .901                      .394         .049*                     .112*        .328*      163.
  PERCNT:10TH
          25TH              .840                      .026        L.05                       .15          .05         10.
   MEDIAN 50TH             1.210                      .067        L.050                      .160         .140        18.
          75TH             2.000                      .530        L.05                       .25          .52         57.
          90TH
SECONDARY CODE

                           10474L       10453L       00205L       36001L       36011L       36102L       36910L       29009L
                           RESIDUE      RESIDUE      TOTAL        COLIFORMS    COLIFORMS    STREP.       STD. PLATE   COPPER
                           TOTAL        FILTRABLE    DISSOLVED    TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                     SOLIDS                                              BACT.DENS.
                   SUBM                                           MPN          MPN          MF                        CU
                   ID      MG/L         MG/L         MG/L         NO/100ML     NO/100ML     NO/100ML     NO/ML        MG/L
SAMPLES(FLAGS)             6(0)         6(0)         6(0)         6(0)         6(1)         6(1)         6(0)         6(1)
           LOW             304.         240.         170.          14.           2.           2.        1200.        L.001
          HIGH             658.         540.         473.        7000.         110.         150.       25000.         .019
       AVERAGE             438.         350.         267.        1661.          49.*         48.*       6483.         .008*
      STD.DEV.             140.         102.         108.        2698.          43.*         57.*       9218.         .007*
  PERCNT:10TH
          25TH             330.         300.         211.         100.         L20.          12.        1500.         .002
   MEDIAN 50TH             387.         325.         231.         525.          35.          21.*       2900.         .006
          75TH             559.         370.         286.        1800.          92.          80.        5400.         .016
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  33                     NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                     SURFACE WATER DATA
STATION 00AL05EB2510    LAT. 53D 53M 23S  LONG. 112D 56M 58S   PR 3   UTM 12 371900E 5972800N  FOR JUN 29, 1983 TO NOV 16, 1983
 BEAVERHILL CREEK -  NEAR MOUTH

                       30009L        26304L        13306L        25003L        28009L        42009L        27009L        33005L
                        ZINC          IRON         ALUMINUM     MANGANESE      NICKEL    MOLYBDENUM        COBALT        ARSENIC
                       TOTAL         EXTRBLE.      EXTRBLE.      TOTAL         TOTAL         TOTAL         TOTAL        TOTAL

               SUBM      ZN            FE           AL            MN             NI            MO            CO            AS
                ID      MG/L         MG/L           MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          6(0)         6(0)           6(0)           6(0)          6(0)          6(3)         6(2)          4(0)
           LOW            .005           .21          .060          .042          .008         L.001         L.001         .0008
          HIGH            .055          7.32         8.450          .284          .022          .006          .006         .0035
       AVERAGE            .017          2.23         1.532          .131          .012          .003*         .003*        .0018
      STD.DEV.            .019          2.67         3.391          .094          .005          .002*         .002*        .0012
   PERCNT:10TH
          25TH            .005           .32          .070          .062          .009         L.001         L.001         .0010
   MEDIAN 50TH            .010          1.47          .115          .098          .010          .002*         .002         .0015
          75TH            .017          2.61          .385          .205          .012          .004          .003         .0026
          90TH
SECONDARY CODE

                       04304L        48009L        24009L        82302L        82009L        80015L      34005L          23009L
                       BERYLLIUM     CADMIUM      CHROMIUM        LEAD          LEAD        MERCURY      SELENIUM     VANADIUM
                        EXTRBLE.     TOTAL         TOTAL        EXTRBLE.       TOTAL         TOTAL       TOTAL           TOTAL

               SUBM      BE            CD            CR            PB            PB           HG             SE            V
                ID      MG/L         MG/L           MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          6(6)         6(5)           6(0)          5(3)                         6(6)         4(4)          6(2)
           LOW           L.001         L.001          .003         L.003                      L.0001        L.0002         L.002
          HIGH           L.001          .002          .008          .031                      L.0001        L.0002          .022
       AVERAGE                          .001*         .005          .010*                                                   .008*
      STD.DEV.                          .000*         .002          .012*                                                   .008*
   PERCNT:10TH
          25TH           L.001         L.001          .003         L.003                      L.0001        L.0002         L.002
   MEDIAN 50TH           L.001         L.001          .004         L.003                      L.0001        L.0002          .007
          75TH           L.001         L.001          .005          .012                      L.0001        L.0002          .009
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  34                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                      SURFACE WATER DATA
STATION 00AL05EB2521     LAT. 53D 56M  2S  LONG. 113D 54M 17S   PR 3   UTM 12 309350E 5979850N  FOR MAY 18, 1982 TO MAR 01, 1984
 NORTH SASKATCHEWAN RIVER     LEFT BANK     DOWNSTREAM OF CONFLUENCE WITH
 BEAVERHILLS CREEK

                         97251F       02065F       08102F       02042F       02041L       10301L       08202L       08301L
                        DEPTH OF   TEMPERATURE    OXYGEN      SPECIFIC     SPECIFIC        PH         OXYGEN       OXYGEN
                        SAMPLING      WATER      DISSOLVED    CONDUCT.     CONDUCT.                  BIOCHEM.     TOTAL COD
                                                                                                   DEMAND-BOD
                  SUBM  FROM SURF.                  O2                                                  O2           O2
                   ID       M          DEG.C       MG/L       USIE/CM       US/CM      PH UNITS       MG/L         MG/L
SAMPLES(FLAGS)            16(0)        22(0)       22(0)       21(0)        22(0)        23(0)        20(1)        23(0)
           LOW              .3           .0         5.7         320.         280.         7.2           .8          5.1
          HIGH             1.8         23.5        14.4         450.         420.         8.5          7.5         62.0
       AVERAGE             1.0         14.4        10.4         386.         356.                      2.4*        19.0
      STD.DEV.              .5          7.3         2.5          38.          35.                      1.6*        14.0
  PERCNT:10TH               .5           .6         7.7         345.         325.         7.8           .9*         7.1
          25TH              .6          9.5         8.7         370.         338.         7.9          1.2           9.
   MEDIAN 50TH             1.0         17.0         9.4         380.         354.         8.1          2.0          15.
          75TH             1.4         19.5        13.          425.         377.         8.3          3.0          24.
          90TH             1.8         20.5        13.8         440.         412.         8.5          4.1          37.
SECONDARY CODE                                                                                                     04L

                         06536L       06005L       06154L       06107L       06905L       06715L       06721L       10151L
                        PHENOLIC      CARBON       CARBON       CARBON       CARBON      CHLORO -   CHLOROPHYLL  ALKALINITY
                        MATERIAL      TOTAL      DISSOLVED    DISSOLVED   PARTICULATE    PHYLL A        -A-         PHENOL
                         PHENOL      ORGANIC     INORGANIC     ORGANIC      TOTAL                    EPILITHON    PHTHALEIN
                  SUBM                  C            C            C            C                                  CACO3
                   ID     MG/L         MG/L         MG/L         MG/L         MG/L        MG/M3        MG/M2        MG/L
SAMPLES(FLAGS)           23(16)        11(0)        15(0)        15(0)        15(0)        10(0)         9(0)        21(4)
           LOW            L.002          6.3         29.0          1.1          .04         3.15       18.828          .0
          HIGH             .006         14.          38.9         11.0        13.13        17.38       210.67           5.
       AVERAGE             .003*         9.8         34.3          4.6         2.09         8.56       74.454          1.2*
      STD.DEV.             .001*         2.9          3.3          3.5         3.29         5.31       58.910          2.0*
  PERCNT:10TH             L.002          6.7         30.0          1.3          .19         3.85                       .0
          25TH            L.002          7.           31.0          2.1          .34         4.56        35.91           0.
   MEDIAN 50TH            L.002          9.3         34.0          2.7         1.12         6.41       50.401           .0
          75TH             .003         12.5         38.           8.1         2.49        11.77       87.269         L4.2
          90TH             .005         14.          38.8         11.0         4.65        17.38                     L4.2
SECONDARY CODE           37L

                         10101L       06301L       06201L       17203L       16306L       09107L       14102L       10602L
                       ALKALINITY   CARBONATE   BICARBONT.    CHLORIDE     SULPHATE     FLUORIDE      SILICA      HARDNESS
                          TOTAL      (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED    DISSOLVED    REACTIVE       TOTAL
                                                                                                                 (CALCD.)
                  SUBM    CACO3         CO3        HCO3           CL          SO4           F           SIO2        CACO3
                   ID     MG/L         MG/L        MG/L          MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            23(0)        21(4)        21(4)        23(5)        23(0)        23(0)        23(0)        23(0)
           LOW             117.           0.         143.          L0.          20.          .12          1.1         119.
          HIGH             155.           6.         185.           8.          60.          .52          6.7         177.
       AVERAGE             137.           1.*        165.*         3.0*         40.          .18          3.6         154.
      STD.DEV.              10.           2.*         13.*         1.8*         10.          .08          1.5          15.
  PERCNT:10TH              126.           0.        Q146.          L0.          25.          .14          1.5         136.
          25TH             130.           0.         157.           2.          35.          .14          2.9         144.
   MEDIAN 50TH             137.           0.         166.           3.          40.          .15          3.2         155.
          75TH             144.          Q5.         176.           5.          45.          .17          4.1         165.
          90TH             152.          Q5.         179.           5.          55.          .23          5.5         167.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 - 0006 PAGE 35

NAQUADAT SUMMARY REPORT APR 30, 1986
SURFACE WATER DATA

STATION 00AL05EB2521 LAT. 53D 56M 2S LONG. 113D 54M 17S PR 3 UTM 12 309350E 5979850N FOR MAY 18, 1982 TO MAR 01, 1984
NORTH SASKATCHEWAN RIVER LEFT BANK DOWNSTREAM OF CONFLUENCE WITH
BEAVERHILLS CREEK

	20110L CALCIUM DISSOLVED	12102L MAGNESIUM DISSOLVED	11103L SODIUM DISSOLVED	19103L POTASSIUM DISSOLVED	15406L PHOSPHOROUS TOTAL PHOSPHATE	15419L PHOSPHORUS TOTAL PHOSPHATE	07403L NITROGEN TOTAL ORG. (CALCD.)	07602L NITROGEN TOTAL (CALCD.)
SUBM ID	CA MG/L	MG MG/L	NA MG/L	K MG/L	P MG/L	P MG/L	N MG/L	N MG/L
SAMPLES(FLAGS)	23(0)	23(0)	23(0)	23(0)	9(0)	11(0)	12(12)	23(12)
LOW	34.	7.	3.	.7	.015	.050	Q.100	Q.350
HIGH	51.	13.0	17.	3.9	.155	.310	Q.500	1.740
AVERAGE	43.	11.3	9.2	1.6	.097	.156		.770*
STD.DEV.	4.	1.4	3.3	.8	.045	.101		.403*
PERCNT:10TH	37.	10.	5.	.9		.056	Q.100	.470
25TH	40.	10.	7.	1.1	.070	.066	.100	.540
MEDIAN 50TH	44.	11.	9.	1.4	.1	.116	.100	Q.550
75TH	46.	12.0	11.	1.6	.135	.280	.200	Q.950
90TH	48.	13.	13.	3.0		.290	Q.400	1.620
SECONDARY CODE						21L		

	07021L NITROGEN TOTAL KJELDAHL	07503L NITROGEN TOTAL AMMONIA	07562L NITROGEN DISSOLVED AMMONIA	07205L NITROGEN DISSOLVED NITRITE	07206L NITROGEN DISSOLVED NITRITE	07105L NITROGEN DISSOLVED NO3 & NO2	07906L NITROGEN PARTICULATE TOTAL	10407L RESIDUE NONFILTRABLE
SUBM ID	N MG/L	N MG/L	N MG/L	N MG/L	N MG/L	N MG/L	N MG/L	MG/L
SAMPLES(FLAGS)	23(8)	12(12)	11(0)	23(22)	12(2)	23(10)	15(3)	16(0)
LOW	.300	L.4	.034	L.05	L.007	L.05	L.01	4.
HIGH	1.400	L.4	1.100	.13	.025	.56	.19	143.
AVERAGE	.627*		.255	.053*	.013*	.143*	.093*	22.
STD.DEV.	.298*		.316	.017*	.006*	.130*	.059*	35.
PERCNT:10TH	.360	L.4	.047	L.05	L.007	L.05	L.01	5.
25TH	.440	L.40	.066	L.05	.007	L.05	.06	8.
MEDIAN 50TH	L.5	L.40	.140	L.05	.012	.10	.08	9.
75TH	.8	L.40	.270	L.05	.018	.18	.15	18.
90TH	1.180	L.4	.540	L.050	.02	.270	.18	59.
SECONDARY CODE	01L							

	10474L RESIDUE TOTAL	10453L RESIDUE FILTRABLE	00205L TOTAL DISSOLVED SOLIDS	36001L COLIFORMS TOTAL	36011L COLIFORMS FECAL	36102L STREP. FECAL	36910L STD. PLATE COUNT BACT.DENS.	29009L COPPER TOTAL
SUBM ID	MG/L	MG/L	MG/L	MPN NO/100ML	MPN NO/100ML	MF NO/100ML	NO/ML	CU MG/L
SAMPLES(FLAGS)	16(0)	16(0)	23(0)	21(0)	21(0)	21(1)	19(0)	23(7)
LOW	247.	240.	141.	170.	20.	2.	70.	L.001
HIGH	423.	350.	236.	24000.	980.	450.	14000.	.020
AVERAGE	306.	278.	191.	3653.	288.	85.*	2871.	.003*
STD.DEV.	52.	37.	22.	5037.	299.	123.*	4107.	.004*
PERCNT:10TH	249.	240.	166.	700.	40.	8.	170.	L.001
25TH	262.	245.	178.	1200.	76.	14.	830.	L.001
MEDIAN 50TH	298.	270.	192.	2600.	150.	30.	1100.	.002
75TH	353.	300.	203.	4000.	450.	90.	3200.	.003
90TH	362.	340.	226.	6200.	750.	290.	14000.	.004
SECONDARY CODE				02L	12L			

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0007 -  0009 PAGE  36                      NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                       SURFACE WATER DATA
STATION 00AL05EB2521    LAT. 53D 56M  2S  LONG. 113D 54M 17S   PR 3   UTM 12 309350E 5979850N  FOR MAY 18, 1982 TO MAR 01, 1984
 NORTH SASKATCHEWAN RIVER     LEFT BANK      DOWNSTREAM OF CONFLUENCE WITH
 BEAVERHILLS CREEK

                        30009L       26304L       13306L       25003L       28009L       42009L       27009L       33005L
                         ZINC         IRON       ALUMINUM    MANGANESE      NICKEL     MOLYBDENUM     COBALT      ARSENIC
                        TOTAL       EXTRBLE.     EXTRBLE.      TOTAL        TOTAL        TOTAL        TOTAL       TOTAL

                 SUBM    ZN           FE           AL           MN           NI           MO           CO           AS
                  ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          23(1)        23(0)        19(0)        20(0)        23(1)        17(16)       23(22)       15(1)
           LOW          L.001          .06         .030         .009        L.001        L.001        L.001        L.0002
          HIGH           .046         2.28        4.440         .106         .009         .004         .003         .0023
       AVERAGE           .016*         .41         .520         .028         .005*        .001*        .001*        .0007*
      STD.DEV.           .013*         .56        1.017         .028         .002*        .001*        .000*        .0007*
   PERCNT:10TH           .003          .06         .050         .010         .004        L.001        L.001         .0003
          25TH           .004          .10         .080         .012         .004        L.001        L.001         .0003
   MEDIAN 50TH           .010          .17         .140         .014         .005        L.001        L.001         .0005
          75TH           .028          .55         .406         .040         .006        L.001        L.001         .0007
          90TH           .034         1.08        1.430         .073         .007        L.001        L.001         .0023
SECONDARY CODE

                        04304L       48009L       24009L       82302L       82009L       80015L       34005L       23009L
                       BERYLLIUM    CADMIUM     CHROMIUM       LEAD         LEAD        MERCURY     SELENIUM     VANADIUM
                        EXTRBLE.     TOTAL        TOTAL       EXTRBLE.      TOTAL        TOTAL      TOTAL         TOTAL

                 SUBM    BE           CD           CR           PB           PB           HG           SE           V
                  ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          19(19)       23(20)       23(6)        9(6)         12(8)        11(11)       15(13)       19(7)
           LOW          L.001        L.001        L.001        L.003        L.003        L.0001       L.0002       L.002
          HIGH          L.001         .002         .010         .007         .010        L.0001        .0006        .013
       AVERAGE                        .001*        .004*        .004*        .004*                     .0002*       .004*
      STD.DEV.                        .000*        .003*        .001*        .002*                     .0001*       .003*
   PERCNT:10TH          L.001        L.001        L.001                     L.003        L.0001       L.0002       L.002
          25TH          L.001        L.001        L.001        L.003        L.003        L.0001       L.0002       L.002
   MEDIAN 50TH          L.001        L.001         .004        L.003        L.003        L.0001       L.0002        .003
          75TH          L.001        L.001         .006         .004         .005        L.0001       L.0002        .006
          90TH          L.001         .002         .007                      .005        L.0001        .0003        .008
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  37                          NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                             SURFACE WATER DATA
STATION 00AL05EB2522    LAT. 53D 55M 58S  LONG. 113D 54M 14S   PR 3   UTM 12 309350E 5979750N  FOR MAY 18, 1982 TO NOV 16, 1983
 NORTH SASKATCHEWAN RIVER        CENTRE     DOWNSTREAM OF CONFLUENCE WITH
 BEAVERHILLS CREEK

                          97251F       02065F       08102F       02042F       02041L       10301L       08202L       08301L
                         DEPTH OF    TEMPERATURE    OXYGEN      SPECIFIC     SPECIFIC       PH          OXYGEN       OXYGEN
                         SAMPLING       WATER     DISSOLVED     CONDUCT.     CONDUCT.                  BIOCHEM.    TOTAL COD
                                                                                                      DEMAND-BOD
                   SUBM  FROM SURF.                  O2                                                   O2           O2
                    ID       M          DEG.C       MG/L        USIE/CM       US/CM       PH UNITS       MG/L         MG/L
SAMPLES(FLAGS)             15(0)        20(0)       20(0)        19(0)        21(0)        21(0)        18(2)        21(0)
           LOW                .3           .5         5.7         305.         279.          7.0          L.3          5.1
          HIGH               3.4         23.5        14.4         450.         407.          8.5          5.1         58.4
       AVERAGE               2.2         15.7         9.2         371.         344.                       2.1*        17.2
      STD.DEV.                .8          5.9         2.1          42.          30.                       1.3*        11.7
  PERCNT:10TH                 .9          6.1         7.5         310.         316.          7.7           .9          6.5
          25TH               1.8         15.3         8.0         340.         330.          7.9         L1.0          10.
   MEDIAN 50TH               2.1         17.5         8.5         375.         340.          8.1          2.1          15.
          75TH               2.7         19.5        10.6         400.         362.          8.3          3.           19.
          90TH               3.4         20.8        12.2         435.         372.          8.4          4.0          28.
SECONDARY CODE                                                                                                       04L

                          06536L       06005L       06154L       06107L       06905L       06715L       06721L       10151L
                         PHENOLIC      CARBON       CARBON       CARBON       CARBON      CHLORO -   CHLOROPHYLL   ALKALINITY
                         MATERIAL      TOTAL      DISSOLVED    DISSOLVED   PARTICULATE    PHYLL A       -A-         PHENOL
                          PHENOL      ORGANIC     INORGANIC     ORGANIC       TOTAL                  EPILITHON    PHTHALEIN
                   SUBM                  C            C            C            C                                  CACO3
                    ID     MG/L        MG/L         MG/L         MG/L         MG/L         MG/M3        MG/M2        MG/L
SAMPLES(FLAGS)            21(15)       11(0)         9(0)         9(0)         9(1)         9(0)                    21(4)
           LOW             L.002          6.         28.0          1.1          L.01         2.29                      .0
          HIGH              .005         13.         38.0          7.5          5.68        15.00                    L4.2
       AVERAGE              .002*         9.4        32.3          4.1          1.88*        6.16                      .8*
      STD.DEV.              .001*         2.4         3.4          2.7          2.01*        3.92                     1.7*
  PERCNT:10TH              L.002          7.1                                                                          .0
          25TH             L.002          7.2        29.0          1.7           .36         3.33                     0.
   MEDIAN 50TH             L.002          8.6        33.0          3.1           .81         5.91                      .0
          75TH              .002         11.         34.0          6.4          3.51         7.66                      .0
          90TH              .003         13.                                                                         L4.2
SECONDARY CODE            37L

                          10101L       06301L       06201L       17203L       16306L       09107L       14102L       10602L
                        ALKALINITY   CARBONATE    BICARBONT.    CHLORIDE     SULPHATE     FLUORIDE      SILICA      HARDNESS
                          TOTAL       (CALCD.)      (CALCD.)    DISSOLVED    DISSOLVED    DISSOLVED    REACTIVE       TOTAL
                                                                                                                   (CALCD.)
                   SUBM    CACO3        CO3         HCO3           CL          SO4           F           SIO2        CACO3
                    ID     MG/L        MG/L        MG/L          MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             21(0)       21(4)         21(4)        21(4)        21(0)        21(0)        21(0)        21(0)
           LOW              118.          0.          144.          L0.          20.          .12          1.6         114.
          HIGH              152.         Q5.          184.           8.          55.          .59          5.9         172.
       AVERAGE              134.          1.*         162.*         2.6*         38.          .18          3.7         150.
      STD.DEV.               10.          2.*          11.*         1.6*         11.          .10          1.2          15.
  PERCNT:10TH               125.          0.         Q146.          L0.          20.          .14          1.8         138.
          25TH              127.          0.          154.           2.          35.          .14          3.2         143.
   MEDIAN 50TH              134.          0.          161.           2.          40.          .15          3.7         154.
          75TH              140.          0.          171.           3.          43.          .16          4.1         159.
          90TH              150.         Q5.         Q175.           4.          48.          .24          5.2         167.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  38                      NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                          SURFACE WATER DATA
STATION 00AL05EB2522    LAT. 53D 55M 58S  LONG. 113D 54M 14S   PR 3   UTM 12 309350E 5979750N  FOR MAY 18, 1982 TO NOV 16, 1983
 NORTH SASKATCHEWAN RIVER        CENTRE     DOWNSTREAM OF CONFLUENCE WITH
 BEAVERHILLS CREEK

                          20110L      12102L      11103L      19103L      15406L      15419L      07403L      07602L
                          CALCIUM    MAGNESIUM    SODIUM    POTASSIUM  PHOSPHOROUS  PHOSPHORUS   NITROGEN    NITROGEN
                         DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED    TOTAL       TOTAL    TOTAL ORG.    TOTAL
                                                                         PHOSPHATE   PHOSPHATE   (CALCD.)    (CALCD.)
                    SUBM     CA          MG          NA          K           P           P           N           N
                     ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             21(0)       21(0)       21(0)       21(0)        9(0)       15(0)       12(12)      21(9)
           LOW               34.          7.          3.          .7        .015        .066      Q-.100      Q.310
          HIGH               49.         13.         14.         2.2        .228        .860      Q.300       3.050
       AVERAGE               41.         11.4         7.6        1.3        .118        .179                   .878*
      STD.DEV.                4.          1.4         2.5         .4        .057        .196                   .588*
  PERCNT:10TH                37.         10.          5.          .9                    .083      Q.100       Q.550
          25TH               40.         11.          6.         1.0        .100        .094       .100        .600
   MEDIAN 50TH               42.         12.          8.         1.1        .106        .122       .100       Q.700
          75TH               43.         12.          9.         1.5        .137        .150       .150        .910
          90TH               47.         13.         10.         1.9                    .280      Q.200       1.400
SECONDARY CODE                                                                       21L

                          07021L      07503L      07562L      07205L      07206L      07105L      07906L      10407L
                         NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    RESIDUE
                           TOTAL       TOTAL    DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED  PARTICULATE NONFILTRABLE
                         KJELDAHL    AMMONIA     AMMONIA     NITRITE     NITRITE    NO3 & NO2    TOTAL
                    SUBM      N           N           N           N           N           N          N
                     ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             21(3)       12(11)      15(0)       21(16)      12(1)       21(5)        9(3)       14(0)
           LOW              .260         L.4        .004        L.05       L.007        L.05        L.01          5.
          HIGH             2.900          .6       2.060         .13        .042         .60         .20        205.
       AVERAGE              .666*        .42*       .275        .059*       .020*       .185*       .077*        41.
      STD.DEV.              .547*        .06*       .503        .020*       .010*       .148*       .072*        60.
  PERCNT:10TH               .390         L.4        .024        L.05        .007        L.05                      8.
          25TH              .470        L.40        .088        L.05        .012         .08        L.01          9.
   MEDIAN 50TH               .5         L.40        .130        L.05        .019         .15         .07         12.
          75TH              .630        L.40        .240        L.05        .026         .20         .13         48.
          90TH              .900         L.4        .340         .08        .031         .35                    142.
SECONDARY CODE             01L

                          10474L      10453L      00205L      36001L      36011L      36102L      36910L      29009L
                          RESIDUE     RESIDUE      TOTAL     COLIFORMS   COLIFORMS    STREP.    STD. PLATE    COPPER
                           TOTAL     FILTRABLE   DISSOLVED     TOTAL       FECAL       FECAL       COUNT       TOTAL
                                                   SOLIDS                                       BACT.DENS.
                    SUBM                                       MPN         MPN          MF                      CU
                     ID     MG/L        MG/L        MG/L     NO/100ML    NO/100ML    NO/100ML     NO/ML        MG/L
SAMPLES(FLAGS)             14(0)       14(0)       21(0)       21(0)       21(0)       21(3)       19(0)       21(7)
           LOW              210.        200.        140.        370.         20.         L2.        210.       L.001
          HIGH              415.        350.        225.      24000.       5700.        520.      26000.        .012
       AVERAGE              302.        261.        183.       6468.       1041.        133.*      4739.        .003*
      STD.DEV.               58.         40.         20.       6691.       1597.        153.*      7265.        .003*
  PERCNT:10TH               231.        210.        161.        970.         72.          6.        600.       L.001
          25TH              269.        240.        169.       1500.        170.         24.       1000.       L.001
   MEDIAN 50TH              291.        265.        189.       4100.        400.         70.       1900.        .003
          75TH              358.        280.        194.       9000.       1100.        200.       5000.        .005
          90TH              382.        310.        204.      13000.       2600.        360.      21000.        .006
SECONDARY CODE                                             02L         12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  39                      NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                        SURFACE WATER DATA
STATION 00AL05EB2522    LAT. 53D 55M 58S  LONG. 113D 54M 14S   PR 3   UTM 12 309350E 5979750N  FOR MAY 18, 1982 TO NOV 16, 1983
 NORTH SASKATCHEWAN RIVER        CENTRE     DOWNSTREAM OF CONFLUENCE WITH
 BEAVERHILLS CREEK

                        30009L       26304L       13306L       25003L       28009L       42009L       27009L       33005L
                         ZINC         IRON       ALUMINUM    MANGANESE      NICKEL     MOLYBDENUM     COBALT       ARSENIC
                        TOTAL       EXTRBLE.     EXTRBLE.      TOTAL        TOTAL        TOTAL        TOTAL        TOTAL

                SUBM     ZN           FE           AL           MN           NI           MO           CO           AS
                 ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          21(1)        21(1)        17(0)        18(3)        21(3)        16(15)       21(19)       13(2)
           LOW           L.001         L.02         .050        L.008        L.001        L.001        L.001       L.0002
          HIGH            .053         2.34        4.530         .122         .031         .005         .003        .0025
       AVERAGE            .020*        .43*         .718         .032*        .007*        .001*        .001*       .0007*
      STD.DEV.            .015*        .54*        1.174         .031*        .007*        .001*        .001*       .0006*
  PERCNT:10TH             .004         .09          .075        L.008        L.001        L.001        L.001       L.0002
          25TH            .006         .12          .145         .011         .003        L.001        L.001        .0003
   MEDIAN 50TH            .014         .18          .257         .017         .006        L.001        L.001        .0005
          75TH            .030         .63          .515         .045         .008        L.001        L.001        .0009
          90TH            .038         .87         2.560         .088         .011        L.001        L.001        .0014
SECONDARY CODE

                        04304L       48009L       24009L       82302L       82009L       80015L       34005L       23009L
                       BERYLLIUM     CADMIUM     CHROMIUM       LEAD         LEAD       MERCURY     SELENIUM     VANADIUM
                        EXTRBLE.      TOTAL        TOTAL       EXTRBLE.      TOTAL        TOTAL      TOTAL          TOTAL

                SUBM     BE           CD           CR           PB           PB           HG           SE           V
                 ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          17(17)       21(19)       21(4)        7(2)         12(10)       9(9)         13(12)       17(7)
           LOW           L.001        L.001        L.001        L.003        L.003       L.0001       L.0002        L.002
          HIGH           L.001         .003         .023         .006         .006       L.0001        .0003         .013
       AVERAGE                         .001*        .005*        .004*        .003*                     .0002*        .004*
      STD.DEV.                         .000*        .005*        .001*        .001*                     .0000*        .003*
  PERCNT:10TH            L.001        L.001        L.001                     L.003                     L.0002        L.002
          25TH           L.001        L.001         .004        L.003        L.003       L.0001       L.0002        L.002
   MEDIAN 50TH           L.001        L.001         .005         .004        L.003       L.0001       L.0002         .003
          75TH           L.001        L.001         .006         .006        L.003       L.0001       L.0002         .006
          90TH           L.001        L.001         .008                      .005                     L.0002         .008
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  40                     NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                        SURFACE WATER DATA
STATION 00AL05EB2523    LAT. 53D 55M 56S  LONG. 113D 54M 11S   PR 3   UTM 12 309450E 5979650N  FOR MAY 18, 1982 TO MAR 01, 1984
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     DOWNSTREAM OF CONFLUENCE WITH
 BEAVERHILLS CREEK

                      97251F       02065F       08102F       02042F       02041L       10301L       08202L       08301L
                     DEPTH OF   TEMPERATURE    OXYGEN      SPECIFIC     SPECIFIC        PH         OXYGEN       OXYGEN
                     SAMPLING      WATER      DISSOLVED    CONDUCT.     CONDUCT.                  BIOCHEM.    TOTAL COD
                                                                                                 DEMAND-BOD
                SUBM FROM SURF.                  O2                                                 O2           O2
                 ID      M         DEG.C        MG/L       USIE/CM        US/CM      PH UNITS       MG/L         MG/L
SAMPLES(FLAGS)          16(0)        21(0)        21(0)        20(0)        23(0)        23(0)        20(1)        23(1)
             LOW           .3           .5          5.3         310.         281.          6.8           .9         L5.0
            HIGH          2.7         23.0         13.0         470.         424.          8.4          6.5         62.9
         AVERAGE          1.7         14.1          9.4         383.         354.                      2.6*        16.8*
        STD.DEV.           .8          7.2          2.3          41.          32.                      1.6*        13.0*
     PERCNT:10TH           .3          1.5           7.         320.         319.          7.4         1.0*          6.9
            25TH          1.0          9.0          7.5         360.         336.          7.7          1.2          7.3
     MEDIAN 50TH          2.1         16.5          9.4         378.         357.          8.0          2.2          13.
            75TH          2.1         19.5         11.6         415.         370.          8.2          3.6          22.
            90TH          2.7          20.         12.4         433.         382.          8.3          5.0          28.
SECONDARY CODE                                                                                               04L

                      06536L       06005L       06154L       06107L       06905L       06715L       06721L       10151L
                     PHENOLIC      CARBON       CARBON       CARBON       CARBON     CHLORO -    CHLOROPHYLL  ALKALINITY
                     MATERIAL      TOTAL      DISSOLVED    DISSOLVED  PARTICULATE    PHYLL A        -A-         PHENOL
                      PHENOL      ORGANIC     INORGANIC     ORGANIC       TOTAL                  EPILITHON   PHTHALEIN
                SUBM                 C            C            C            C                                 CACO3
                 ID    MG/L        MG/L         MG/L         MG/L         MG/L        MG/M3        MG/M2         MG/L
SAMPLES(FLAGS)         23(16)        11(0)        15(0)        15(0)        15(1)         9(0)         9(0)        21(2)
             LOW        L.002           7.         29.0           .9         L.01         2.63        6.018           .0
            HIGH         .004         13.4         39.0          7.7         6.69        19.26       238.91         L4.2
         AVERAGE        .002*          8.9         34.3          3.5        1.46*         6.23      107.471          .4*
        STD.DEV.        .001*          1.7          3.2          2.5        1.75*         5.02       80.225         1.3*
     PERCNT:10TH        L.002          7.1         29.0           .9          .33                                   .0
            25TH        L.002           8.         32.0          1.3          .40         4.13       29.716           0.
     MEDIAN 50TH        L.002          8.6         34.0          2.6         1.00         4.51       107.06           0.
            75TH         .003           9.         37.0          6.2         1.78         5.38       139.67           .0
            90TH         .003          10.         38.4          7.1         3.90                                   .0
SECONDARY CODE       37L

                      10101L       06301L       06201L       17203L       16306L       09107L       14102L       10602L
                    ALKALINITY   CARBONATE    BICARBONT.    CHLORIDE     SULPHATE     FLUORIDE      SILICA      HARDNESS
                      TOTAL      (CALCD.)      (CALCD.)    DISSOLVED    DISSOLVED    DISSOLVED    REACTIVE       TOTAL
                                                                                                               (CALCD.)
                SUBM   CACO3         CO3         HCO3           CL          SO4            F         SIO2        CACO3
                 ID    MG/L         MG/L        MG/L          MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          23(0)        21(2)        21(2)        23(2)        23(0)        23(0)        23(0)        23(0)
             LOW         117.           0.        Q142.          L0.          20.          .12          1.8         120.
            HIGH         155.          Q5.         189.          10.          63.         1.15          6.4         177.
         AVERAGE         133.          0.*        162.*         3.2*          39.          .21          3.7         153.
        STD.DEV.          10.          2.*         13.*         1.9*          10.          .21          1.2          14.
     PERCNT:10TH         122.           0.         145.           2.          25.          .14          1.8         135.
            25TH         125.           0.         154.           2.          35.          .15          3.1         141.
     MEDIAN 50TH         133.           0.         163.           3.          40.          .15          3.5         157.
            75TH         139.           0.         169.           4.          45.          .17          4.1         163.
            90TH         149.           0.         178.           5.          50.          .22          5.5         173.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  41                  NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                      SURFACE WATER DATA
STATION 00AL05EB2523    LAT. 53D 55M 56S  LONG. 113D 54M 11S   PR 3   UTM 12 309450E 5979650N  FOR MAY 18, 1982 TO MAR 01, 1984
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     DOWNSTREAM OF CONFLUENCE WITH
 BEAVERHILLS CREEK

                       20110L       12102L       11103L       19103L       15406L       15419L       07403L       07602L
                       CALCIUM     MAGNESIUM     SODIUM     POTASSIUM   PHOSPHOROUS  PHOSPHCRUS    NITROGEN     NITROGEN
                      DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL        TOTAL     TOTAL ORG.      TOTAL
                                                                        PHOSPHATE    PHOSPHATE     (CALCD.)     (CALCD.)
                SUBM     CA           MG           NA            K            P            P            N            N
                 ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
  SAMPLES(FLAGS)          23(0)        23(0)        23(0)        23(0)         9(0)        11(0)       12(10)        23(4)
             LOW            35.          8.           3.           .7         .023         .060        Q.100         .370
            HIGH            51.         14.          13.          2.7         .182        1.650        1.700        5.570
         AVERAGE            42.         11.5          8.2         1.2         .125         .286         .375*       1.397*
        STD.DEV.             4.          1.3          2.4          .5         .046         .462         .469*       1.136*
     PERCNT:10TH            37.         10.           6.           .9                      .072        Q.100         .610
            25TH            40.         11.           7.          1.0         .109         .078         .100        Q.750
     MEDIAN 50TH            43.         12.           8.          1.0         .126         .104         .200         .950
            75TH            44.         12.          10.          1.2         .154         .240         .400        1.950
            90TH            48.         13.          11.          2.0                      .380        Q.800        2.420
  SECONDARY CODE                                                                        21L

                       07021L       07503L       07562L       07205L       07206L       07105L       07906L       10407L
                      NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN      RESIDUE
                        TOTAL        TOTAL      DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED   PARTICULATE NONFILTRABLE
                      KJELDAHL      AMMONIA      AMMONIA      NITRITE      NITRITE    NO3 & NO2      TOTAL
                SUBM      N            N            N            N            N            N            N
                 ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
  SAMPLES(FLAGS)          23(2)       12(10)        11(0)       23(14)        12(1)        23(2)        15(2)        16(0)
             LOW           .260          L.4         .034         L.05        L.007         L.05         L.01           6.
            HIGH          5.300           .5        4.000          .28         .059          .90         1.00         251.
         AVERAGE          1.031*         .42*        .718         .089*        .031*        .366*        .169*         33.
        STD.DEV.          1.050*         .04*       1.138         .067*        .016*        .251*        .266*         60.
     PERCNT:10TH           .420          L.4         .140         L.05         .014          .11         L.01           7.
            25TH             .5         L.40         .150         L.05         .019         .150         .040          11.
     MEDIAN 50TH             .7         L.40         .240         L.05         .030          .27          .08          14.
            75TH            1.2         L.40         .720          .12         .041          .54          .11          25.
            90TH          1.720           .5        1.160          .20         .054         .820          .56          58.
  SECONDARY CODE        01L

                       10474L       10453L       00205L       36001L       36011L       36102L       36910L       29009L
                       RESIDUE      RESIDUE       TOTAL      COLIFORMS    COLIFORMS     STREP.     STD. PLATE     COPPER
                        TOTAL      FILTRABLE    DISSOLVED      TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                 SOLIDS                                           BACT.DENS.
                SUBM                                           MPN          MPN           MF                       CU
                 ID     MG/L         MG/L         MG/L       NO/100ML     NO/100ML     NO/100ML      NO/ML         MG/L
  SAMPLES(FLAGS)          16(0)        16(0)        23(0)        21(0)        21(0)        21(0)        19(0)        23(3)
             LOW           218.         210.         140.         350.          30.           2.          50.        L.001
            HIGH           461.         350.         223.       50000.       16000.         700.       27000.         .019
         AVERAGE           304.         271.         187.        6163.        1156.         139.        4994.         .004*
        STD.DEV.            57.          39.          19.       11404.        3421.         187.        7333.         .004*
     PERCNT:10TH           241.         210.         160.         500.          80.           8.         530.        L.001
            25TH           270.         250.         174.        1100.         120.          20.        1200.         .002
     MEDIAN 50TH           305.         270.         190.        2400.         250.          90.        2000.         .003
            75TH           320.         295.         199.        4700.         900.         140.        5600.         .005
            90TH           379.         310.         205.        9200.        1000.         300.       22000.         .006
  SECONDARY CODE                                            02L          12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  42                        NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                          SURFACE WATER DATA
STATION 00AL05EB2523    LAT. 53D 55M 56S  LONG. 113D 54M 11S   PR 3   UTM 12 309450E 5979650N  FOR MAY 18, 1982 TO MAR 01, 1984
 NORTH SASKATCHEWAN RIVER    RIGHT BANK     DOWNSTREAM OF CONFLUENCE WITH
 BEAVERHILLS CREEK

                           30009L      26304L      13306L      25003L      28009L      42009L      27009L      33005L
                            ZINC        IRON      ALUMINUM   MANGANESE     NICKEL    MOLYBDENUM    COBALT     ARSENIC
                           TOTAL      EXTRBLE.    EXTRBLE.     TOTAL       TOTAL       TOTAL       TOTAL      TOTAL

                     SUBM   ZN          FE          AL          MN          NI          MO          CO          AS
                      ID   MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             23(0)       23(0)       19(0)       20(0)       23(1)       18(13)      23(20)      15(2)
           LOW               .003         .03        .040        .009      L.001       L.001       L.001      L.0002
          HIGH               .051        2.72       5.140        .119       .085        .006        .007       .0025
       AVERAGE               .021         .44        .545        .030       .012*       .002*       .001*      .0008*
      STD.DEV.               .017         .64       1.141        .030       .017*       .002*       .001*      .0007*
  PERCNT:10TH                .005         .06        .045        .010       .004       L.001       L.001      L.0002
          25TH               .007         .10        .100        .012       .005       L.001       L.001       .0004
   MEDIAN 50TH               .013         .16        .180        .016       .007       L.001       L.001       .0005
          75TH               .036         .55        .489        .044       .010        .004       L.001       .0007
          90TH               .048         .93       1.010        .075       .022        .004        .003       .0024
SECONDARY CODE

                           04304L      48009L      24009L      82302L      82009L      80015L      34005L      23009L
                          BERYLLIUM    CADMIUM    CHROMIUM      LEAD        LEAD       MERCURY    SELENIUM    VANADIUM
                           EXTRBLE.    TOTAL       TOTAL      EXTRBLE.     TOTAL       TOTAL     TOTAL        TOTAL

                     SUBM   BE          CD          CR          PB          PB          HG          SE          V
                      ID   MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             19(19)      23(21)      23(1)       9(4)        12(7)       10(10)      15(13)      19(5)
           LOW             L.001       L.001       L.001       L.003       L.003       L.0001      L.0002      L.002
          HIGH             L.001        .003        .008        .009        .007       L.0001       .0005       .014
       AVERAGE                          .001*       .005*       .005*       .004*                   .0002*      .004*
      STD.DEV.                          .000*       .002*       .002*       .001*                   .0001*      .003*
  PERCNT:10TH              L.001       L.001        .003                   L.003       L.0001      L.0002      L.002
          25TH             L.001       L.001        .003       L.003       L.003       L.0001      L.0002      L.002
   MEDIAN 50TH             L.001       L.001        .005        .004       L.003       L.0001      L.0002       .003
          75TH             L.001       L.001        .008        .006        .005       L.0001      L.0002       .006
          90TH             L.001       L.001        .008                    .006       L.0001       .0003       .012
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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NAQUADAT SUMMARY REPORT APR 30, 1986
SURFACE WATER DATA

STATION 00AL05EC2301 LAT. 53D 59M 30S LONG. 112D 28M 47S PR 3 UTM 12 403000E 5983400N FOR MAY 19, 1982 TO MAR 01, 1984
NORTH SASKATCHEWAN RIVER LEFT BANK ABOVE PAKAN BRIDGE 90M UPSTREAM

SUBM ID	97251F DEPTH OF SAMPLING FROM SURF. M	02065F TEMPERATURE WATER DEG.C	08102F OXYGEN DISSOLVED O2 MG/L	02042F SPECIFIC CONDUCT. USIE/CM	02041L SPECIFIC CONDUCT. US/CM	10301L PH PH UNITS	08202L OXYGEN BIOCHEM. DEMAND-BOD O2 MG/L	08301L OXYGEN TOTAL COD O2 MG/L
SAMPLES(FLAGS)	16(0)	21(0)	21(0)	20(0)	23(0)	23(0)	19(3)	23(0)
LOW	.3	.2	5.8	280.	279.	7.3	.5	5.6
HIGH	2.4	23.2	14.8	430.	410.	8.7	5.9	27.
AVERAGE	1.3	14.0	9.9	366.	349.		2.1*	14.7
STD.DEV.	.6	7.4	2.3	38.	29.		1.3*	6.5
PERCNT:10TH	.3	.5	7.6	315.	315.	7.7	.9	6.9
25TH	.9	8.0	8.6	345.	328.	7.8	L1.0	8.
MEDIAN 50TH	1.5	16.5	9.4	360.	352.	8.0	2.0	15.
75TH	1.7	19.5	10.8	393.	364.	8.3	2.8	20.
90TH	2.1	20.	13.	413.	389.	8.4	3.9	22.7
SECONDARY CODE								04L

SUBM ID	06536L PHENOLIC MATERIAL PHENOL MG/L	06005L CARBON TOTAL ORGANIC C MG/L	06154L CARBON DISSOLVED INORGANIC C MG/L	06107L CARBON DISSOLVED ORGANIC C MG/L	06905L CARBON PARTICULATE TOTAL C MG/L	06715L CHLORO - PHYLL A MG/M3	06721L CHLOROPHYLL -A- EPILITHON MG/M2	10151L ALKALINITY PHENOL PHTHALEIN CACO3 MG/L
SAMPLES(FLAGS)	22(16)	11(0)	15(0)	15(0)	15(1)	9(0)	9(0)	21(4)
LOW	L.002	6.	28.0	.7	L.01	2.56	19.604	.0
HIGH	.005	13.	37.	9.6	5.25	29.28	290.74	10.
AVERAGE	.002*	9.6	33.1	3.4	1.39*	9.56	123.164	1.6*
STD.DEV.	.001*	1.8	2.3	2.5	1.37*	7.95	105.624	2.9*
PERCNT:10TH	L.002	8.4	31.0	.8	.45			.0
25TH	L.002	8.7	31.9	1.6	.52	5.55	32.54	0.
MEDIAN 50TH	L.002	9.3	33.0	2.8	.95	8.20	85.135	.0
75TH	.002	10.	35.0	4.1	1.66	10.41	203.40	L4.2
90TH	.004	12.0	36.0	6.9	3.57			L4.2
SECONDARY CODE	37L							

SUBM ID	10101L ALKALINITY TOTAL CACO3 MG/L	06301L CARBONATE (CALCD.) CO3 MG/L	06201L BICARBONT. (CALCD.) HCO3 MG/L	17203L CHLORIDE DISSOLVED CL MG/L	16306L SULPHATE DISSOLVED SO4 MG/L	09107L FLUORIDE DISSOLVED F MG/L	14102L SILICA REACTIVE SIO2 MG/L	10602L HARDNESS TOTAL (CALCD.) CACO3 MG/L
SAMPLES(FLAGS)	23(0)	21(4)	21(4)	23(5)	23(0)	23(0)	23(0)	23(0)
LOW	117.	0.	143.	L0.	20.	.12	.6	119.
HIGH	158.	12.	177.	10.	60.	.45	13.5	177.
AVERAGE	134.	2.*	160.*	3.0*	40.	.18	3.5	151.
STD.DEV.	10.	4.*	10.*	2.0*	10.	.08	2.6	14.
PERCNT:10TH	119.	0.	145.	L0.	25.	.13	1.0	135.
25TH	127.	0.	154.	2.	38.	.14	2.5	141.
MEDIAN 50TH	134.	0.	162.	3.	40.	.15	3.0	150.
75TH	139.	Q5.	167.	4.	44.	.17	4.0	159.
90TH	147.	Q5.	169.	5.	50.	.22	5.2	171.
SECONDARY CODE								

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0004 -  0006 PAGE  44                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                      SURFACE WATER DATA
STATION 00AL05EC2301    LAT. 53D 59M 30S  LONG. 112D 28M 47S   PR 3   UTM 12 403000E 5983400N  FOR MAY 19, 1982 TO MAR 01, 1984
 NORTH SASKATCHEWAN RIVER     LEFT BANK      ABOVE PAKAN BRIDGE 90M UPSTREAM

                          20110L      12102L      11103L      19103L       15406L       15419L       07403L       07602L
                          CALCIUM    MAGNESIUM    SODIUM    POTASSIUM   PHOSPHOROUS  PHOSPHORUS    NITROGEN     NITROGEN
                         DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED     TOTAL        TOTAL      TOTAL ORG.     TOTAL
                                                                         PHOSPHATE    PHOSPHATE     (CALCD.)     (CALCD.)
                  SUBM      CA          MG          NA          K            P            P            N            N
                   ID      MG/L        MG/L        MG/L        MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             23(0)       23(0)       23(0)       23(0)        10(0)        11(0)        12(11)       23(11)
           LOW               34.          5.          3.          .7          .032         .068        Q.100        Q.410
          HIGH               51.         14.         13.         2.3          .176         .560        Q.300        2.620
       AVERAGE               42.         11.1         8.0        1.3          .102         .201         .133*        .885*
      STD.DEV.                4.          2.0         2.8         .5          .042         .163         .065*        .539*
  PERCNT:10TH                36.         10.          4.          .9          .045         .076        Q.100        Q.550
          25TH               40.         10.          6.         1.0          .084         .084         .100        Q.550
   MEDIAN 50TH               42.         12.          8.         1.2          .097         .122         .100        Q.750
          75TH               44.         12.0        10.         1.3          .129         .300         .150        1.000
          90TH               47.         13.         12.         2.0          .157         .440         .200        1.620
SECONDARY CODE                                                                            21L

                          07021L      07503L      07562L      07205L       07206L       07105L       07906L       10407L
                         NITROGEN    NITROGEN    NITROGEN    NITROGEN     NITROGEN     NITROGEN     NITROGEN     RESIDUE
                           TOTAL       TOTAL     DISSOLVED   DISSOLVED    DISSOLVED    DISSOLVED   PARTICULATE NONFILTRABLE
                         KJELDAHL     AMMONIA     AMMONIA     NITRITE      NITRITE     NO3 & NO2     TOTAL
                  SUBM       N           N           N           N            N            N            N
                   ID      MG/L        MG/L        MG/L        MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             23(6)       12(11)      11(1)       23(19)       12(3)        23(7)        15(2)        16(0)
           LOW              .300        L.4        L.002       L.05         L.007        L.05         L.01           3.
          HIGH             2.060         .4        1.660        .100         .032         .560         .34         164.
       AVERAGE              .681*        .40*       .389*       .054*        .017*        .204*        .117*         25.
      STD.DEV.              .422*        .00*       .587*       .011*        .009*        .154*        .096*         39.
  PERCNT:10TH               .360        L.4         .014       L.05         L.007        L.05         L.01           5.
          25TH             L.5          L.40        .040       L.05          .008*       L.05          .040          8.
   MEDIAN 50TH              .5          L.40        .072       L.05          .016         .20          .10          12.
          75TH              .700        L.40        .540       L.05          .027         .27          .19          21.
          90TH             1.100        L.4        1.400        .060         .027         .40          .270         51.
SECONDARY CODE             01L

                          10474L      10453L      00205L      36001L       36011L       36102L       36910L       29009L
                          RESIDUE     RESIDUE      TOTAL     COLIFORMS    COLIFORMS     STREP.     STD. PLATE     COPPER
                           TOTAL     FILTRABLE   DISSOLVED     TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                  SOLIDS                                           BACT.DENS.
                  SUBM                                          MPN          MPN          MF                        CU
                   ID      MG/L        MG/L        MG/L      NO/100ML     NO/100ML     NO/100ML      NO/ML         MG/L
SAMPLES(FLAGS)             16(0)       16(0)       23(0)       20(0)        20(1)        20(4)        17(0)        23(6)
           LOW              229.        220.        139.         76.         L10.          L1.          90.        L.001
          HIGH              424.        340.        222.     320000.        9100.         550.       65000.         .007
       AVERAGE              299.        274.        187.      20706.         641.*         90.*       6978.         .003*
      STD.DEV.               49.         36.         19.      70904.        2010.*        143.*      16824.         .002*
  PERCNT:10TH               249.        240.        158.        110.          10.          L2.         280.        L.001
          25TH              260.        245.        178.        350.          20.           3.         810.        L.001
   MEDIAN 50TH              300.        270.        187.       1400.         105.          45.        1200.         .003
          75TH              321.        295.        199.       9000.         300.         100.        2400.         .004
          90TH              353.        330.        211.      24000.         850.         305.       33000.         .005
SECONDARY CODE                                                 02L          12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  45                             NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                             SURFACE WATER DATA
STATION 00AL05EC2301    LAT. 53D 59M 30S  LONG. 112D 28M 47S   PR 3   UTM 12 403000E 5983400N  FOR MAY 19, 1982 TO MAR 01, 1984
 NORTH SASKATCHEWAN RIVER     LEFT BANK      ABOVE PAKAN BRIDGE 90M UPSTREAM

                          30009L      26304L      13306L      25003L      28009L      42009L      27009L      33005L
                           ZINC        IRON      ALUMINUM    MANGANESE    NICKEL    MOLYBDENUM    COBALT     ARSENIC
                          TOTAL      EXTRBLE.    EXTRBLE.     TOTAL       TOTAL       TOTAL       TOTAL      TOTAL

                  SUBM     ZN          FE          AL          MN          NI          MO          CO          AS
                   ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            23(0)       23(0)       19(1)       20(1)       23(1)       18(18)      23(22)      15(2)
           LOW             .003         .02       L.020       L.008       L.001       L.001       L.001       L.0002
          HIGH             .041        2.36       4.410        .117        .026       L.001        .002        .004
       AVERAGE             .019         .38        .550*       .028*       .007*                   .001*       .0008*
      STD.DEV.             .015         .57       1.016*       .029*       .005*                   .000*       .0009*
  PERCNT:10TH              .003         .05        .050        .010        .004       L.001       L.001       L.0002
          25TH             .004         .09        .080        .011        .005       L.001       L.001        .0004
   MEDIAN 50TH             .013         .18        .138        .015        .006       L.001       L.001        .0005
          75TH             .035         .45        .546        .036        .007       L.001       L.001        .0008
          90TH             .039         .61       1.580        .071        .012       L.001       L.001        .0015
SECONDARY CODE

                          04304L      48009L      24009L      82302L      82009L      80015L      34005L      23009L
                         BERYLLIUM    CADMIUM    CHROMIUM      LEAD        LEAD       MERCURY    SELENIUM    VANADIUM
                          EXTRBLE.    TOTAL       TOTAL      EXTRBLE.     TOTAL       TOTAL      TOTAL        TOTAL

                  SUBM     BE          CD          CR          PB          PB          HG          SE          V
                   ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            19(19)      23(20)      23(3)        7(4)       12(7)       11(11)      15(13)      19(8)
           LOW            L.001       L.001       L.001       L.003       L.003       L.0001      L.0002      L.002
          HIGH            L.001        .004        .009        .007        .008       L.0001       .0004       .012
       AVERAGE                         .001*       .005*       .004*       .004*                   .0002*      .004*
      STD.DEV.                         .001*       .002*       .002*       .002*                   .0001*      .003*
  PERCNT:10TH             L.001       L.001       L.001                   L.003       L.0001      L.0002      L.002
          25TH            L.001       L.001        .003       L.003       L.003       L.0001      L.0002      L.002
   MEDIAN 50TH            L.001       L.001        .004       L.003       L.003       L.0001      L.0002       .003
          75TH            L.001       L.001        .006        .005        .005       L.0001      L.0002       .006
          90TH            L.001        .002        .008                    .007       L.0001       .0003       .007
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  46                   NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                       SURFACE WATER DATA
STATION 00AL05EC2302    LAT. 53D 59M 26S  LONG. 112D 28M 47S   PR 3   UTM 12 403000E 5983250N  FOR MAY 19, 1982 TO NOV 16, 1983
 NORTH SASKATCHEWAN RIVER        CENTRE     ABOVE PAKAN BRIDGE   -    90M UPSTREAM

                97251F     02065F     08102F     02042F     02041L     10301L     08202L     08301L
               DEPTH OF  TEMPERATURE  OXYGEN    SPECIFIC   SPECIFIC      PH       OXYGEN     OXYGEN
               SAMPLING     WATER    DISSOLVED  CONDUCT.   CONDUCT.              BIOCHEM.   TOTAL COD
                                                                                DEMAND-BOD
         SUBM FROM SURF.                02                                          02         02
          ID       M        DEG.C      MG/L      USIE/CM     US/CM     PH UNITS     MG/L       MG/L
SAMPLES(FLAGS)   14(0)      19(0)      19(0)      18(0)      21(0)      21(0)      17(1)      20(0)
           LOW        .0         .4        5.6       300.       279.        7.3         .3        6.1
          HIGH       2.7       23.5       14.4       440.       410.        8.7        5.4       69.2
       AVERAGE       1.6       15.7        9.2       372.       345.                  2.0*      18.0
      STD.DEV.        .7        6.2        2.3        38.        30.                  1.3*      13.9
   PERCNT:10TH        .9         4.        5.8       300.       309.        7.6         .4        7.7
          25TH       1.2       15.2        7.9       350.       327.        7.9         1.        9.9
   MEDIAN 50TH       1.5       17.2        8.4       373.       343.        8.2        2.1       15.1
          75TH       1.8       19.5        11.       400.       363.        8.3        2.3       20.0
          90TH       2.5       21.5       12.4       430.       372.        8.4        3.7       29.5
SECONDARY CODE                                                                                  04L

                06536L     06005L     06154L     06107L     06905L     06715L     06721L     10151L
               PHENOLIC    CARBON     CARBON     CARBON     CARBON    CHLORO -  CHLOROPHYLL ALKALINITY
               MATERIAL     TOTAL    DISSOLVED  DISSOLVED PARTICULATE  PHYLL A      -A-      PHENOL
                PHENOL     ORGANIC   INORGANIC   ORGANIC     TOTAL               EPILITHON  PHTHALEIN
         SUBM                C          C          C          C                              CACO3
          ID     MG/L       MG/L       MG/L       MG/L       MG/L       MG/M3      MG/M2      MG/L
SAMPLES(FLAGS)  20(12)      10(0)      9(0)       9(0)       9(1)       9(0)       1(0)       21(2)
           LOW     L.002        5.5       29.0         .7       L.01       2.77     10.961         .0
          HIGH      .013        11.       36.0        8.5       5.06      29.21     10.961        9.2
       AVERAGE      .003*       8.7       32.4        3.9       1.38*     10.13                   1.1*
      STD.DEV.      .003*       2.0        2.5        2.5       1.47*      7.99                   2.5*
   PERCNT:10TH     L.002        5.8                                                               .0
          25TH     L.002        7.5       31.0        2.0        .81       5.91                    0.
   MEDIAN 50TH     L.002        9.0       32.0        3.4       1.10       7.47                    .0
          75TH      .004        10.       35.0        5.5       1.18      11.54                    .0
          90TH      .005       11.0                                                             L4.2
SECONDARY CODE   37L

                10101L     06301L     06201L     17203L     16306L     09107L     14102L     10602L
              ALKALINITY  CARBONATE BICARBONT.  CHLORIDE   SULPHATE   FLUORIDE    SILICA    HARDNESS
                 TOTAL    (CALCD.)   (CALCD.)   DISSOLVED  DISSOLVED  DISSOLVED  REACTIVE     TOTAL
                                                                                            (CALCD.)
         SUBM   CACO3       CO3       HCO3        CL         SO4         F        SIO2       CACO3
          ID     MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)   21(0)      21(2)      21(2)      21(6)      21(0)      21(0)      21(1)      21(0)
           LOW      116.         0.       141.        L0.        20.        .12        L.5       114.
          HIGH      157.        11.       178.        11.        60.        .58        6.0       171.
       AVERAGE      134.         1.*      160.*      2.8*       37.        .17        3.2*      149.
      STD.DEV.       10.         3.*       11.*       2.3*       11.        .10        1.5*       15.
   PERCNT:10TH      122.         0.       146.        L0.        20.        .13        1.1       133.
          25TH      127.         0.       152.        L0.        30.        .15        2.7       141.
   MEDIAN 50TH      133.         0.       161.         2.        40.        .15        3.2       149.
          75TH      138.         0.       167.         4.        42.        .16        4.0       159.
          90TH      146.        Q5.       176.         4.        50.        .19        5.3       168.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  47                        NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                          SURFACE WATER DATA
STATION 00AL05EC2302    LAT. 53D 59M 26S  LONG. 112D 28M 47S   PR 3   UTM 12 403000E 5983250N  FOR MAY 19, 1982 TO NOV 16, 1983
 NORTH SASKATCHEWAN RIVER        CENTRE     ABOVE PAKAN BRIDGE   -   90M UPSTREAM

                    20110L      12102L      11103L      19103L      15406L      15419L      07403L      07602L
                    CALCIUM     MAGNESIUM   SODIUM      POTASSIUM   PHOSPHOROUS PHOSPHORUS  NITROGEN    NITROGEN
                    DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   TOTAL       TOTAL       TOTAL ORG.  TOTAL
                                                                    PHOSPHATE   PHOSPHATE   (CALCD.)    (CALCD.)
              SUBM      CA          MG          NA          K           P           P           N           N
               ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)         21(0)       21(0)       21(0)       21(0)       10(0)       14(0)       11(11)      20(8)
           LOW           34.          7.          3.          .8        .024        .076       Q.100       Q.410
          HIGH           48.         14.         13.         2.5        .250        .960       Q.400       3.850
       AVERAGE           41.        11.2         7.8         1.3        .117        .188                    .961*
      STD.DEV.            4.         1.5         2.9          .5        .062        .230                    .766*
  PERCNT:10TH            35.         10.          4.          .9        .045        .078       Q.100        .525
          25TH           40.         10.          6.         1.0        .079        .097       Q.100        .560
   MEDIAN 50TH           41.         11.          7.         1.2        .105        .114       Q.100        .680
          75TH           44.         12.          9.         1.6        .153        .149       Q.300        .955
          90TH           47.         13.         12.         2.0        .204        .320       Q.300       1.640
SECONDARY CODE                                                                      21L

                    07021L      07503L      07562L      07205L      07206L      07105L      07906L      10407L
                    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    RESIDUE
                    TOTAL       TOTAL       DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   PARTICULATE NONFILTRABLE
                    KJELDAHL    AMMONIA     AMMONIA     NITRITE     NITRITE     NO3 & NO2   TOTAL
              SUBM      N           N           N           N           N           N           N
               ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)         20(4)       11(11)      14(1)       21(17)      11(1)       21(5)       9(3)        14(0)
           LOW          .320        L.4        L.002        L.05       L.007        L.05        L.01          7.
          HIGH         3.400        L.4        2.500         .10        .036         .65         .54        161.
       AVERAGE          .713*                   .299*       .056*       .018*       .229*       .160*        31.
      STD.DEV.          .673*                   .642*       .013*       .010*       .160*       .170*        40.
  PERCNT:10TH           .355        L.4         .010        L.05        .008        L.05                      8.
          25TH          .400        L.4         .042        L.05        .009         .07        L.01          9.
   MEDIAN 50TH         L.500        L.4         .125        L.05        .014         .20         .13         16.
          75TH          .665        L.4         .200        L.05        .030         .32         .21         35.
          90TH         1.140        L.4         .320         .07        .031         .45                     58.
SECONDARY CODE      01L

                    10474L      10453L      00205L      36001L      36011L      36102L      36910L      29009L
                    RESIDUE     RESIDUE     TOTAL       COLIFORMS   COLIFORMS   STREP.      STD. PLATE  COPPER
                    TOTAL       FILTRABLE   DISSOLVED   TOTAL       FECAL       FECAL       COUNT       TOTAL
                                            SOLIDS                                          BACT.DENS.
              SUBM                                      MPN         MPN         MF                      CU
               ID      MG/L        MG/L        MG/L     NO/100ML    NO/100ML    NO/100ML     NO/ML      MG/L
SAMPLES(FLAGS)         14(0)       14(0)       21(0)       19(0)       19(2)       20(3)       18(0)       21(5)
           LOW          207.        200.        137.         52.         L2.         L1.         50.       L.001
          HIGH          391.        340.        219.      25000.       8700.       4400.     35000.        .016
       AVERAGE          297.        266.        183.       3641.       605.*       300.*      4059.        .004*
      STD.DEV.           47.         41.         20.       6314.      1970.*       988.*      8068.        .004*
  PERCNT:10TH           264.        230.        158.        140.          2.         L2.         60.       L.001
          25TH          266.        240.        175.        330.         14.          6.        960.        .002
   MEDIAN 50TH          288.        255.        182.       1100.         96.         39.       1650.        .002
          75TH          328.        280.        193.       2800.        280.         48.       4000.        .005
          90TH          357.        330.        208.      14000.        820.        555.       9700.        .008
SECONDARY CODE                                          02L         12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 - 0009 PAGE 48 NAQUADAT SUMMARY REPORT APR 30, 1986

SURFACE WATER DATA

STATION 00AL05EC2302 LAT. 53D 59M 26S LONG. 112D 28M 47S PR 3 UTM 12 403000E 5983250N FOR MAY 19, 1982 TO NOV 16, 1983

NORTH SASKATCHEWAN RIVER CENTRE ABOVE PAKAN BRIDGE - 90M UPSTREAM

	30009L ZINC TOTAL	26304L IRON EXTRBLE.	13306L ALUMINUM EXTRBLE.	25003L MANGANESE TOTAL	28009L NICKEL TOTAL	42009L MOLYBDENUM TOTAL	27009L COBALT TOTAL	33005L ARSENIC TOTAL
SUBM ID	ZN MG/L	FE MG/L	AL MG/L	MN MG/L	NI MG/L	MO MG/L	CO MG/L	AS MG/L
SAMPLES(FLAGS)	21(1)	21(1)	17(0)	18(2)	21(0)	17(14)	21(21)	13(2)
LOW	L.001	L.02	.035	L.008	.003	L.001	L.001	L.0002
HIGH	.057	2.56	4.740	.108	.039	.005	L.001	.0020
AVERAGE	.018*	.50*	.597	.030*	.009	.002*		.0007*
STD.DEV.	.016*	.68*	1.130	.029*	.008	.001*		.0005*
PERCNT:10TH	.004	.06	.065	L.008	.004	L.001	L.001	L.0002
25TH	.006	.11	.100	.012	.005	L.001	L.001	.0004
MEDIAN 50TH	.016	.25	.202	.018	.007	L.001	L.001	.0005
75TH	.025	.58	.381	.045	.009	L.001	L.001	.0008
90TH	.044	.87	1.450	.088	.021	.004	L.001	.0012
SECONDARY CODE								

	04304L BERYLLIUM EXTRBLE.	48009L CADMIUM TOTAL	24009L CHROMIUM TOTAL	82302L LEAD EXTRBLE.	82009L LEAD TOTAL	80015L MERCURY TOTAL	34005L SELENIUM TOTAL	23009L VANADIUM TOTAL
SUBM ID	BE MG/L	CD MG/L	CR MG/L	PB MG/L	PB MG/L	HG MG/L	SE MG/L	V MG/L
SAMPLES(FLAGS)	17(17)	21(18)	21(3)	6(1)	12(8)	9(9)	12(10)	17(6)
LOW	L.001	L.001	L.001	L.003	L.003	L.0001	L.0002	L.002
HIGH	L.001	.003	.010	.008	.008	L.0001	.0004	.013
AVERAGE		.001*	.005*	.006*	.004*		.0002*	.004*
STD.DEV.		.001*	.003*	.002*	.001*		.0001*	.003*
PERCNT:10TH	L.001	L.001	L.001		L.003		L.0002	L.002
25TH	L.001	L.001	.004	.005	L.003	L.0001	L.0002	L.002
MEDIAN 50TH	L.001	L.001	.005	.006	L.003	L.0001	L.0002	.003
75TH	L.001	L.001	.007	.008	.004	L.0001	L.0002	.006
90TH	L.001	.002	.009		.005		.0003	.008
SECONDARY CODE								

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0001 -  0003 PAGE  49                    NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                    SURFACE WATER DATA
STATION 00AL05EC2303    LAT. 53D 59M 22S  LONG. 112D 28M 47S   PR 3   UTM 12 403000E 5983150N  FOR MAY 19, 1982 TO MAR 01, 1984
 NORTH SASKATCHEWAN RIVER    RIGHT BANK      ABOVE PAKAN BRIDGE         90M UPSTREAM

                        97251F      02065F      08102F      02042F      02041L      10301L      08202L      08301L
                       DEPTH OF   TEMPERATURE   OXYGEN     SPECIFIC    SPECIFIC       PH        OXYGEN      OXYGEN
                       SAMPLING      WATER     DISSOLVED   CONDUCT.    CONDUCT.                BIOCHEM.    TOTAL COD
                                                                                              DEMAND-BOD
                  SUBM  FROM SURF.                02                                              O2          O2
                   ID      M         DEG.C       MG/L      USIE/CM      US/CM      PH UNITS      MG/L        MG/L
SAMPLES(FLAGS)          16(0)       20(0)       20(0)       19(0)       23(0)       23(0)       19(2)       23(0)
           LOW             .3          .5         5.6        310.        275.         7.2         L.3         6.1
          HIGH            2.7        23.5        14.2        440.        419.         8.7         5.6        97.3
       AVERAGE            1.4        14.7         9.4        372.        347.                     2.1*       18.2
      STD.DEV.             .7         6.8         2.2         34.         30.                     1.4*       19.3
   PERCNT:10TH             .3         2.3         7.2        310.        311.         7.7          .5         7.3
          25TH            1.0        11.5         8.0        350.        331.         7.9        L1.0         7.8
    MEDIAN 50TH           1.6        16.8         9.0        370.        349.         8.1         1.8        12.4
          75TH            1.8        19.5        10.8        400.        361.         8.2         3.0        19.
          90TH            2.1        20.8        12.4        425.        374.         8.4         4.1        28.
SECONDARY CODE                                                                                             04L

                        06536L      06005L      06154L      06107L      06905L      06715L      06721L      10151L
                       PHENOLIC     CARBON      CARBON      CARBON      CARBON     CHLORO -   CHLOROPHYLL ALKALINITY
                       MATERIAL     TOTAL     DISSOLVED   DISSOLVED  PARTICULATE   PHYLL A       -A-        PHENOL
                        PHENOL     ORGANIC    INORGANIC    ORGANIC     TOTAL                  EPILITHON   PHTHALEIN
                  SUBM                C           C           C          C                                CACO3
                   ID    MG/L       MG/L        MG/L        MG/L        MG/L        MG/M3       MG/M2       MG/L
SAMPLES(FLAGS)          22(15)      11(0)       14(0)       14(0)       15(1)        9(0)        9(0)       21(2)
           LOW           L.002        7.         28.0          .9        L.01        2.18       10.96          .0
          HIGH           L.02        11.         37.         8.3        3.64       22.26      280.09         9.2
       AVERAGE            .003*       9.0        32.9         3.3        1.29*       8.14       96.164        1.2*
      STD.DEV.            .004*       1.4         3.0         2.2        1.10*       6.20       85.316        2.6*
   PERCNT:10TH           L.002        7.         28.0         1.1         .19                                  .0
          25TH           L.002        7.6        31.0         1.5         .56        5.14       29.197        0.
    MEDIAN 50TH          L.002        9.2        33.5         2.9        1.06        6.35       78.754         .0
          75TH            .003       10.         35.2         3.8        1.91        8.71      131.15          .0
          90TH            .004       10.1        36.0         7.1        3.54                                 L4.2
SECONDARY CODE          37L

                        10101L      06301L      06201L      17203L      16306L      09107L      14102L      10602L
                      ALKALINITY   CARBONATE   BICARBONT.   CHLORIDE    SULPHATE    FLUORIDE    SILICA     HARDNESS
                        TOTAL      (CALCD.)    (CALCD.)    DISSOLVED   DISSOLVED   DISSOLVED   REACTIVE     TOTAL
                                                                                                          (CALCD.)
                  SUBM   CACO3        CO3        HCO3         CL          SO4          F         SIO2        CACO3
                   ID    MG/L        MG/L      MG/L         MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)          23(0)       21(2)       21(2)       23(3)       23(0)       23(0)       23(1)       23(0)
           LOW           115.          0.        140.         L0.         20.         .12         L.5        116.
          HIGH           158.         11.        178.         11.         58.         .74         6.0        172.
       AVERAGE           133.          1.*       161.*        3.0*        39.         .19         3.3*       151.
      STD.DEV.            10.          3.*        11.*        2.2*        10.         .14         1.5*        14.
   PERCNT:10TH           120.          0.        145.         L0.         30.         .14         1.1        134.
          25TH           127.          0.        154.          2.         30.         .15         2.6        141.
    MEDIAN 50TH          134.          0.        163.          2.         40.         .15         3.2        155.
          75TH           138.          0.        167.          4.         44.         .16         4.0        161.
          90TH           146.         Q5.        174.          5.         50.         .18         5.3        168.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  50                         NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                          SURFACE WATER DATA
STATION 00AL05EC2303    LAT. 53D 59M 22S  LONG. 112D 28M 47S   PR 3   UTM 12 403000E 5983150N  FOR MAY 19, 1982 TO MAR 01, 1984
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     ABOVE PAKAN BRIDGE        90M UPSTREAM

                             20110L       12102L       11103L       19103L       15406L       15419L       07403L       07602L
                            CALCIUM     MAGNESIUM      SODIUM     POTASSIUM   PHOSPHOROUS   PHOSPHORUS    NITROGEN     NITROGEN
                           DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL        TOTAL      TOTAL ORG.     TOTAL
                                                                              PHOSPHATE    PHOSPHATE     (CALCD.)     (CALCD.)
                    SUBM       CA           MG           NA           K            P            P            N            N
                     ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)              23(0)        23(0)        23(0)        23(0)        10(0)        11(0)        12(11)       23(9)
           LOW                35.           7.           3.           .6         .027         .019        Q.100        Q.410
          HIGH                49.         13.0          13.          2.7         .166         .940        Q.400        4.020
       AVERAGE                42.         11.2          7.9          1.2         .110         .250         .167*       1.115*
      STD.DEV.                 4.          1.4          2.8           .5         .050         .296         .098*        .849*
  PERCNT:10TH                 37.          10.           4.           .9         .044         .060        Q.100        Q.550
          25TH                39.          10.           6.          1.0         .066         .090         .100        Q.650
   MEDIAN 50TH                42.         11.0           7.          1.1         .116         .112         .100        Q.800
          75TH                44.          12.           9.          1.4         .154         .360         .200        1.230
          90TH                48.          13.          12.          1.8         .163         .680        Q.300        2.080
SECONDARY CODE                                                                              21L

                             07021L       07503L       07562L       07205L       07206L       07105L       07906L       10407L
                            NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     RESIDUE
                             TOTAL        TOTAL      DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED   PARTICULATE NONFILTRABLE
                            KJELDAHL     AMMONIA      AMMONIA      NITRITE      NITRITE     NO3 & NO2      TOTAL
                    SUBM       N            N            N            N            N            N            N
                     ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)              23(6)        12(11)       11(1)        23(18)       12(1)        23(4)        15(2)        16(0)
           LOW               .300          L.4        L.002         L.05         .006         L.05         L.01           4.
          HIGH              3.400           .5        2.400         .140         .044          .70        1.400         209.
       AVERAGE               .827*         .41*        .531*        .059*        .022*        .288*        .203*         28.
      STD.DEV.               .731*         .03*        .826*        .022*        .013*        .182*        .337*         50.
  PERCNT:10TH                .380          L.4         .015         L.05        L.007         L.05         L.01           5.
          25TH                L.5         L.40         .051         L.05         .011          .15          .08           8.
   MEDIAN 50TH               .560         L.40         .110         L.05         .020          .30          .12          13.
          75TH                 .8         L.40         .650         L.05         .034          .38          .17          22.
          90TH              1.380          L.4        1.880          .08         .038          .60          .24          55.
SECONDARY CODE              01L

                             10474L       10453L       00205L       36001L       36011L       36102L       36910L       29009L
                            RESIDUE      RESIDUE       TOTAL      COLIFORMS    COLIFORMS     STREP.     STD. PLATE     COPPER
                             TOTAL      FILTRABLE    DISSOLVED      TOTAL        FECAL        FECAL        COUNT        TOTAL
                                                       SOLIDS                                           BACT.DENS.
                    SUBM                                             MPN          MPN           MF                       CU
                     ID      MG/L         MG/L         MG/L       NO/100ML     NO/100ML     NO/100ML       NO/ML        MG/L
SAMPLES(FLAGS)              16(0)        16(0)        23(0)        21(0)        21(1)        21(2)        18(0)        23(5)
           LOW               247.         240.         137.          32.          L2.          L2.         100.        L.001
          HIGH               469.         340.         222.       15000.       13000.        1500.       27000.         .009
       AVERAGE               300.         272.         186.        3111.         860.*        147.*       3700.         .003*
      STD.DEV.                53.          29.          18.        4383.        2816.*        331.*       6390.         .002*
  PERCNT:10TH                260.         240.         163.         100.           6.           2.         140.        L.001
          25TH               267.         255.         175.         220.          16.           6.         730.         .002
   MEDIAN 50TH               283.         260.         188.        1300.          88.          42.        1400.         .002
          75TH               320.         285.         198.        3000.         310.         120.        3300.         .005
          90TH               348.         320.         206.        9700.        1300.         210.       11000.         .006
SECONDARY CODE                                                 02L          12L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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                                               NAQUADAT SUMMARY REPORT  APR 30, 1986
                                                  SURFACE WATER DATA
STATION 00AL05EC2303    LAT. 53D 59M 22S  LONG. 112D 28M 47S   PR 3   UTM 12 403000E 5983150N  FOR MAY 19, 1982 TO MAR 01, 1984
 NORTH SASKATCHEWAN RIVER   RIGHT BANK     ABOVE PAKAN BRIDGE        90M UPSTREAM

                        30009L      26304L      13306L      25003L      28009L      42009L      27009L      33005L
                         ZINC        IRON      ALUMINUM    MANGANESE    NICKEL    MOLYBDENUM    COBALT     ARSENIC
                        TOTAL      EXTRBLE.    EXTRBLE.      TOTAL       TOTAL       TOTAL       TOTAL      TOTAL

                  SUBM    ZN          FE          AL          MN          NI          MO          CO          AS
                   ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           23(1)       23(0)       19(0)       20(2)       23(1)       18(14)      23(21)      15(1)
           LOW           L.001         .04        .035       L.008       L.001       L.001       L.001      L.0002
          HIGH            .054        2.81       4.710        .124        .057        .006        .003       .0018
       AVERAGE            .020*        .45        .607        .029*       .010*       .002*       .001*      .0006*
      STD.DEV.            .018*        .70       1.111        .032*       .011*       .002*       .001*      .0004*
   PERCNT:10TH            .004         .05        .050        .008*       .004       L.001       L.001       .0003
          25TH            .006         .11        .090        .011        .006       L.001       L.001       .0004
   MEDIAN 50TH            .008         .16        .201        .014        .007       L.001       L.001       .0005
          75TH            .037         .51        .536        .035        .009       L.001       L.001       .0006
          90TH            .049         .89       2.120        .077        .016        .005       L.001       .0011
SECONDARY CODE

                        04304L      48009L      24009L      82302L      82009L      80015L      34005L      23009L
                       BERYLLIUM    CADMIUM    CHROMIUM      LEAD        LEAD       MERCURY    SELENIUM    VANADIUM
                        EXTRBLE.     TOTAL       TOTAL     EXTRBLE.      TOTAL       TOTAL     TOTAL         TOTAL

                  SUBM    BE          CD          CR          PB          PB          HG          SE          V
                   ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           19(19)      23(20)      23(2)       8(5)        12(7)       11(11)      15(13)      19(8)
           LOW           L.001       L.001       L.001       L.003       L.003       L.0001      L.0002      L.002
          HIGH           L.001        .002        .011        .005        .010       L.0001       .0005       .014
       AVERAGE                        .001*       .005*       .003*       .005*                   .0002*      .004*
      STD.DEV.                        .000*       .003*       .001*       .003*                   .0001*      .003*
   PERCNT:10TH           L.001       L.001        .003                   L.003       L.0001      L.0002      L.002
          25TH           L.001       L.001        .003       L.003       L.003       L.0001      L.0002      L.002
   MEDIAN 50TH           L.001       L.001        .006       L.003       L.003       L.0001      L.0002       .003
          75TH           L.001       L.001        .008        .004        .007       L.0001      L.0002       .006
          90TH           L.001        .002        .009                    .008       L.0001       .0004       .008
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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SECTION 2

NAQUADAT Summary Report for analyses of final effluent grab samples from the sewage treatment plants licensed to discharge into the study section of the North Saskatchewan River.

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REQUEST 0001 -  0003 PAGE   1                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 21AL05DF1000    LAT. 53D 22M  0S  LONG. 113D 44M  0S   PR 3   UTM 12 318150E 5916300N  FOR MAY 17, 1983 TO NOV 15, 1983
DEVON SEWAGE TREATMENT PLANT                    FINAL EFFLUENT GRAB

                           02041L        10301L        97160S        97163S
                          SPECIFIC         PH         DISCHARGE     DISCHARGE
                          CONDUCT.                     INSTANT        DAILY
                                                                      MEAN
                    SUBM
                     ID     US/CM       PH UNITS        M3/S          CFS
SAMPLES(FLAGS)             10(0)         10(0)         10(0)         10(0)
           LOW              717.           7.5          .0152         .5381
          HIGH              957.           8.4          .0247         .8714
       AVERAGE              825.                        .0191         .6742
      STD.DEV.               59.                        .0026         .0909
   PERCNT:10TH              761.           7.5          .0163         .5763
          25TH              809.           7.6          .0178         .6272
   MEDIAN 50TH              821.           7.7          .0185         .6534
          75TH              824.           7.8          .0204         .7213
          90TH              908.           8.1          .0231         .8147
SECONDARY CODE

                           08202L        08304L        06537L        06154L        06107L        06905L        10701L        97160S
                           OXYGEN        OXYGEN       PHENOLIC       CARBON        CARBON        CARBON       SURFACT.      DISCHARGE
                          BIOCHEM.        TOTAL       MATERIAL      DISSOLVED     DISSOLVED    PARTICULATE    N-ALKYL        INSTANT
                         DEMAND-BOD        COD                      INORGANIC      ORGANIC        TOTAL      SULPHNTS.
                    SUBM     O2            O2          PHENOL           C             C             C           LAS
                     ID     MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)             10(1)         10(1)         10(0)         10(0)         10(0)         10(0)          1(0)         10(0)
           LOW              L1.0          L5.0          .007          52.0           6.9           .60           .68         .0152
          HIGH               5.1          48.3          .012          76.0          13.0          3.76           .68         .0247
       AVERAGE               3.3*         32.8*         .009          59.5          10.0          2.06                       .0191
      STD.DEV.               1.2*         11.0*         .002           7.1           1.6          1.11                       .0026
   PERCNT:10TH               1.6*         17.0*         .007          52.5           8.0           .89                       .0163
          25TH               2.6          31.4          .007          56.0           9.6          1.19                       .0178
   MEDIAN 50TH               3.2          34.7          .010          57.0           9.9          1.82                       .0185
          75TH               3.8          36.4          .011          60.0          10.1          3.00                       .0204
          90TH               5.0          43.3          .012          71.5          12.5          3.73                       .0231
SECONDARY CODE

                           10151L        10101L        06301L        06201L        17203L        16306L        09107L        14102L
                         ALKALINITY    ALKALINITY     CARBONATE     BICARBONT.     CHLORIDE      SULPHATE      FLUORIDE       SILICA
                           PHENOL         TOTAL        (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED     DISSOLVED     REACTIVE
                         PHTHALEIN
                    SUBM   CACO3         CACO3          CO3           HCO3           CL           SO4            F           SIO2
                     ID     MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)             10(0)         10(0)         10(0)         10(0)         10(0)         10(0)         10(0)         10(0)
           LOW                .0          201.            0.          245.           37.           78.           .49          11.7
          HIGH               4.2          309.            5.          377.           48.          110.          1.32          15.6
       AVERAGE                .4          233.            1.          283.           42.           94.           .85          13.0
      STD.DEV.               1.3           33.            2.           41.            4.           11.           .25           1.1
   PERCNT:10TH                .0          207.            0.          248.           38.           81.           .58          11.8
          25TH                .0          214.            0.          258.           39.           90.           .67          12.5
   MEDIAN 50TH                .0          217.            0.          265.           41.           91.           .78          12.9
          75TH                .0          240.            0.          293.           45.          105.          1.10          13.3
          90TH               2.1          289.            3.          352.           48.          110.          1.22          14.8
SECONDARY CODE
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                                                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                        INDUSTRIAL MONITORING
STATION 21AL05DF1000    LAT. 53D 22M  0S  LONG. 113D 44M  0S   PR 3   UTM 12 318150E 5916300N  FOR MAY 17, 1983 TO NOV 15, 1983
DEVON SEWAGE TREATMENT PLANT              FINAL EFFLUENT GRAB

                         10602L      20110L      12102L      11103L      19103L      06608L      15421L      97160S
                        HARDNESS    CALCIUM     MAGNESIUM    SODIUM     POTASSIUM     CYANIDE   PHOSPHORUS  DISCHARGE
                          TOTAL    DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED                   TOTAL       INSTANT
                        (CALCD.)
                  SUBM    CACO3        CA          MG          NA          K            CN          P
                   ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L         M3/S
 SAMPLES(FLAGS)           10(0)       10(0)       10(0)       10(0)       10(0)       10(2)       10(0)        10(0)
            LOW            211.         58.         16.         52.         7.7       L.002        .076        .0152
           HIGH            370.        102.         28.         77.        10.0        .011       6.500        .0247
        AVERAGE            257.         71.         20.         66.         9.2        .006*      4.718        .0191
       STD.DEV.             50.         14.          4.          7.          .7        .003*      2.065        .0026
    PERCNT:10TH            215.         59.         16.         57.         8.2       L.002       1.738        .0163
           25TH            222.         61.         17.         64.         9.0        .003       3.450        .0178
    MEDIAN 50TH            233.         65.         18.         65.         9.3        .007       5.300        .0185
           75TH            280.         79.         21.         70.         9.7        .009       6.400        .0204
           90TH            340.         93.         27.         77.        10.0        .010       6.500        .0231
 SECONDARY CODE

                         07021L      07562L      07205L      07105L      07906L      97160S
                        NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    DISCHARGE
                          TOTAL    DISSOLVED   DISSOLVED   DISSOLVED  PARTICULATE   INSTANT
                        KJELDAHL    AMMONIA     NITRITE    NO3 & NO2    TOTAL
                  SUBM      N           N           N           N           N
                   ID     MG/L        MG/L        MG/L        MG/L        MG/L         M3/S
 SAMPLES(FLAGS)            9(0)       10(0)        9(0)       10(0)       10(4)        10(0)
            LOW           2.360       1.100         .12        6.00        L.01        .0152
           HIGH           7.750       6.200         .54       11.00         .27        .0247
        AVERAGE           4.712       3.071        .357       8.170         .10*       .0191
       STD.DEV.           1.604       1.554        .154       1.470         .09*       .0026
    PERCNT:10TH                       1.100                   6.500        L.01        .0163
           25TH           3.600       2.000         .30        7.00        L.01        .0178
    MEDIAN 50TH           4.350       3.395         .35       8.350         .08        .0185
           75TH           5.500       3.920         .48        8.70         .17        .0204
           90TH                       5.150                  10.350         .24        .0231
 SECONDARY CODE

                         10407L      10474L      10453L      00205L      36011L      36001L      36102L      36910L
                         RESIDUE     RESIDUE     RESIDUE      TOTAL     COLIFORMS   COLIFORMS    STREP.    STD. PLATE
                       NONFILTRABLE   TOTAL     FILTRABLE   DISSOLVED     FECAL       TOTAL       FECAL       COUNT
                                                              SOLIDS                                        BACT.DENS.
                  SUBM                                                    MPN         MPN         MF
                   ID     MG/L        MG/L        MG/L        MG/L      NO/100ML    NO/100ML    NO/100ML      NO/ML
 SAMPLES(FLAGS)            1(0)        1(0)        1(0)       10(0)       10(3)       10(1)        9(2)       10(0)
            LOW              6.        516.        510.        448.         L2.         L2.         L2.         80.
           HIGH              6.        516.        510.        563.         14.        490.        960.       2500.
        AVERAGE                                                478.          4.*        85.*       127.*       751.
       STD.DEV.                                                 37.          4.*       151.*       314.*       705.
    PERCNT:10TH                                                449.         L2.          2.*                   115.
           25TH                                                455.          2.          8.          2.        160.
    MEDIAN 50TH                                                465.          2.         32.         12.        638.
           75TH                                                482.          5.         46.         42.        800.
           90TH                                                542.         12.*       335.                   1850.
 SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE   3                  NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                INDUSTRIAL MONITORING
STATION 21AL05DF1000    LAT. 53D 22M  0S  LONG. 113D 44M  0S   PR 3   UTM 12 318150E 5916300N  FOR MAY 17, 1983 TO NOV 15, 1983
DEVON SEWAGE TREATMENT PLANT              FINAL EFFLUENT GRAB

                      29009L      30009L      26304L      13306L      25003L      28009L      42009L      27009L
                      COPPER       ZINC        IRON      ALUMINUM   MANGANESE    NICKEL    MOLYBDENUM    COBALT
                       TOTAL      TOTAL      EXTRBLE.    EXTRBLE.     TOTAL      TOTAL       TOTAL       TOTAL

                SUBM    CU          ZN          FE          AL          MN          NI          MO          CO
                 ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)         10(3)       10(0)       10(0)       10(0)       10(0)       10(0)       10(8)       10(9)
           LOW         L.001        .010         .05        .035        .045        .004       L.001       L.001
          HIGH          .020        .023         .31         .75        .137        .011        .006        .002
       AVERAGE          .006*       .013         .12        .141        .071        .006        .002*       .001*
      STD.DEV.          .007*       .004         .08        .216        .025        .002        .002*       .000*
   PERCNT:10TH         L.001        .011         .06        .035        .050        .004       L.001       L.001
          25TH         L.001        .011         .06        .065        .058        .005       L.001       L.001
   MEDIAN 50TH          .004        .012         .10        .075        .065        .006       L.001       L.001
          75TH          .005        .013         .15        .105        .075        .006       L.001       L.001
          90TH          .018        .020         .26        .435        .108        .009        .005        .001*
SECONDARY CODE
                      33005L      04304L      48009L      24009L      82302L      80015L      34005L      23009L
                      ARSENIC    BERYLLIUM    CADMIUM    CHROMIUM      LEAD      MERCURY    SELENIUM    VANADIUM
                     TOTAL        EXTRBLE.    TOTAL       TOTAL      EXTRBLE.     TOTAL     TOTAL        TOTAL

                SUBM    AS          BE          CD          CR          PB          HG          SE          V
                 ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)         10(0)       10(10)      10(8)       10(0)       10(8)        9(9)       10(9)       10(2)
           LOW         .0008       L.001       L.001        .003       L.003      L.0001      L.0002       L.002
          HIGH         .0014       L.001        .003        .010        .005      L.0001       .0005        .006
       AVERAGE         .0010                    .001*       .005        .003*                  .0002*       .004*
      STD.DEV.         .0002                    .001*       .002        .001*                  .0001*       .001*
   PERCNT:10TH         .0008       L.001       L.001        .003       L.003                  L.0002       L.002
          25TH         .0008       L.001       L.001        .003       L.003      L.0001      L.0002        .003
   MEDIAN 50TH         .0010       L.001       L.001        .005       L.003      L.0001      L.0002        .004
          75TH         .0011       L.001       L.001        .005       L.003      L.0001      L.0002        .005
          90TH         .0013       L.001        .003        .008        .005                   .0003*       .006
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE   4                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 21AL05EB1000    LAT. 53D 33M  0S  LONG. 113D 28M  0S   PR 3   UTM 12 336600E 5936050N  FOR MAY 17, 1983 TO NOV 16, 1983
EDMONTON GOLD BAR S.T.P.                          FINAL EFFLUENT GRAB

                           02041L      10301L      97160S      97163S
                          SPECIFIC       PH       DISCHARGE   DISCHARGE
                          CONDUCT.                 INSTANT      DAILY
                                                                MEAN
                     SUBM
                      ID    US/CM     PH UNITS      M3/S         CFS
SAMPLES(FLAGS)              10(0)       10(0)      10(0)        10(0)
           LOW               420.         7.1      2.6111      92.202
          HIGH              1101.         7.9      4.1435      146.32
       AVERAGE               851.                  3.0462     107.566
      STD.DEV.               185.                   .5074     17.9171
  PERCNT:10TH                601.         7.2      2.6290     92.8360
          25TH               805.         7.2      2.7627      97.557
   MEDIAN 50TH               862.         7.2      2.8101     99.2320
          75TH               902.         7.5      3.2639      115.25
          90TH              1084.         7.7      3.9265     138.655
SECONDARY CODE

                           08202L      08304L      06537L      06154L      06107L       06905L        10701L      97160S
                           OXYGEN      OXYGEN     PHENOLIC     CARBON      CARBON       CARBON       SURFACT.    DISCHARGE
                          BIOCHEM.      TOTAL     MATERIAL   DISSOLVED   DISSOLVED   PARTICULATE     N-ALKYL      INSTANT
                        DEMAND-BOD       COD                 INORGANIC    ORGANIC       TOTAL       SULPHNTS.
                     SUBM    O2          O2        PHENOL        C           C            C            LAS
                      ID    MG/L        MG/L        MG/L        MG/L        MG/L         MG/L          MG/L
SAMPLES(FLAGS)              10(0)       10(0)      10(0)       10(0)       10(0)        10(1)                     M3/S
           LOW                5.1        27.2       .010        29.0         5.8         L.01                    10(0)
          HIGH               55.2        50.2       .052        56.0        12.0         6.69                   2.6111
       AVERAGE               22.7        37.5       .016        42.2         9.3         2.59*                  4.1435
      STD.DEV.               13.2         6.6       .013         8.4         1.8         2.12*                  3.0462
  PERCNT:10TH                 8.5        28.6       .010        29.5         6.8          .52*                   .5074
          25TH               15.0        32.9       .011        38.4         7.9         1.06                   2.6290
   MEDIAN 50TH               22.4        38.8       .012        43.0         9.6         2.15                   2.7627
          75TH               24.9        40.6       .015        47.0        11.0         3.52                   2.8101
          90TH               40.6        45.6       .035        53.5        11.5         6.12                   3.2639
SECONDARY CODE                                                                                                  3.9265

                           10151L      10101L      06301L      06201L      17203L       16306L       09107L      14102L
                         ALKALINITY  ALKALINITY   CARBONATE   BICARBONT.   CHLORIDE     SULPHATE     FLUORIDE     SILICA
                           PHENOL       TOTAL      (CALCD.)    (CALCD.)   DISSOLVED    DISSOLVED    DISSOLVED    REACTIVE
                         PHTHALEIN
                     SUBM   CACO3       CACO3        CO3        HCO3          CL          SO4            F          SIO2
                      ID    MG/L        MG/L        MG/L       MG/L          MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)              10(0)       10(0)      10(0)         10(0)      10(0)        10(0)        10(0)        10(0)
           LOW                 .0        113.         0.          138.        44.          127.          .57          8.2
          HIGH                 .0        205.         0.          250.        66.          270.         1.21         12.2
       AVERAGE                 .0        155.         0.          188.        52.          174.         1.05          9.5
      STD.DEV.                 .0         33.         0.           40.         7.           58.          .19          1.2
  PERCNT:10TH                  .0        115.         0.          140.        44.          129.          .72          8.2
          25TH                 .0        122.         0.          149.        47.          135.         1.04          8.4
   MEDIAN 50TH                 .0        155.         0.          189.        51.          140.         1.13          9.2
          75TH                 .0        186.         0.          227.        56.          230.         1.15         10.1
          90TH                 .0        198.         0.          241.        61.          268.         1.18         11.4
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE   5                  NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                 INDUSTRIAL MONITORING
STATION 21AL05EB1000    LAT. 53D 33M  0S  LONG. 113D 28M  0S   PR 3   UTM 12 336600E 5936050N  FOR MAY 17, 1983 TO NOV 16, 1983
EDMONTON GOLD BAR S.T.P.                    FINAL EFFLUENT GRAB

                        10602L      20110L      12102L      11103L      19103L      06608L      15421L      97160S
                       HARDNESS     CALCIUM    MAGNESIUM    SODIUM     POTASSIUM    CYANIDE   PHOSPHORUS   DISCHARGE
                         TOTAL     DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED                 TOTAL      INSTANT
                        (CALCD.)
                SUBM     CACO3        CA          MG          NA          K           CN          P
                 ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)           10(0)       10(0)       10(0)       10(0)       10(0)       10(0)       10(0)       10(0)
           LOW            162.         40.         15.         67.         9.5        .003       2.050      2.6111
          HIGH            394.         92.         40.         81.        11.0        .010       5.050      4.1435
       AVERAGE            236.         57.         23.         76.        10.2        .005       3.535      3.0462
      STD.DEV.             87.         19.         10.          4.          .5        .002       1.066       .5074
   PERCNT:10TH            164.         40.         15.         70.         9.5        .003       2.175      2.6290
          25TH            179.         47.         16.         73.         9.8        .004       2.450      2.7627
    MEDIAN 50TH           197.         50.         18.         78.        10.1        .004       3.775      2.8101
          75TH            273.         63.         28.         79.        10.5        .006       4.250      3.2639
          90TH            390.         92.         39.         80.        11.0        .009       4.925      3.9265
SECONDARY CODE

                        07021L      07562L      07205L      07105L      07906L      97160S
                       NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    DISCHARGE
                         TOTAL     DISSOLVED   DISSOLVED   DISSOLVED  PARTICULATE   INSTANT
                       KJELDAHL     AMMONIA     NITRITE    NO3 & NO2     TOTAL
                SUBM       N           N           N           N           N
                 ID      MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)            9(0)       10(0)       10(0)       10(0)       10(1)       10(0)
           LOW           2.600       1.730         .32        1.87        L.01      2.6111
          HIGH          26.000      21.600       18.20       18.50        6.70      4.1435
       AVERAGE          12.422      10.789       3.156       6.714        1.08*     3.0462
      STD.DEV.           7.634       7.061       5.414       4.953        2.02*      .5074
   PERCNT:10TH                       2.365        .320       1.995         .02*     2.6290
          25TH           7.500       4.600         .45        2.25         .09      2.7627
    MEDIAN 50TH          9.500       9.330       1.240       6.000         .47      2.8101
          75TH          16.500      17.200        2.62        8.50        1.06      3.2639
          90TH                      20.600      11.100      13.600        3.93      3.9265
SECONDARY CODE

                        10407L      10474L      10453L      00205L      36011L      36001L      36102L      36910L
                        RESIDUE     RESIDUE     RESIDUE      TOTAL     COLIFORMS   COLIFORMS    STREP.    STD. PLATE
                     NONFILTRABLE    TOTAL     FILTRABLE   DISSOLVED     FECAL       TOTAL       FECAL       COUNT
                                                            SOLIDS                                         BACT.DENS.
                SUBM                                                    MPN         MPN          MF
                 ID      MG/L        MG/L        MG/L        MG/L     NO/100ML    NO/100ML    NO/100ML      NO/ML
SAMPLES(FLAGS)            1(0)        1(0)        1(0)       10(0)        6(0)        7(1)        7(0)        6(0)
           LOW             10.        530.        520.        437.      20000.      23000.       6400.      14000.
          HIGH             10.        530.        520.        667.      96000.     699999.      46000.      89000.
       AVERAGE                                                518.      67000.      57428.*     17443.      41500.
      STD.DEV.                                                 79.      33389.      34961.*     13828.      34367.
   PERCNT:10TH                                                448.
          25TH                                                481.      29000.      25000.       7000.      17050.
    MEDIAN 50TH                                               485.      84000.      46000.      13000.      23500.
          75TH                                                556.      89000.      95000.      22000.      82000.
          90TH                                                656.
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE   6                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 21AL05EB1000    LAT. 53D 33M  0S  LONG. 113D 28M  0S   PR 3   UTM 12 336600E 5936050N  FOR MAY 17, 1983 TO NOV 16, 1983
EDMONTON GOLD BAR S.T.P.                      FINAL EFFLUENT GRAB

                          29009L      30009L      26304L      13306L      25003L      28009L      42009L      27009L
                          COPPER      ZINC        IRON        ALUMINUM    MANGANESE   NICKEL      MOLYEDENUM  COBALT
                          TOTAL       TOTAL       EXTRBLE.    EXTRBLE.    TOTAL       TOTAL       TOTAL       TOTAL

                  SUBM    CU          ZN          FE          AL          MN          NI          MO          CO
                  ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            10(1)       10(0)       10(1)       10(0)       10(0)       10(0)       10(7)       10(9)
           LOW             L.001        .039        L.02        .023        .027        .016       L.001       L.001
          HIGH              .027        .084         .28        .944        .069        .042        .005        .002
       AVERAGE              .008*       .057         .12*       .145        .045        .021        .002*       .001*
      STD.DEV.              .008*       .014         .07*       .282        .014        .008        .002*       .000*
   PERCNT:10TH              .001*       .043         .04*       .029        .028        .016       L.001       L.001
          25TH              .003        .047         .08        .035        .036        .017       L.001       L.001
    MEDIAN 50TH             .005        .054         .11        .055        .044        .020       L.001       L.001
          75TH              .012        .066         .15        .085        .052        .022        .004       L.001
          90TH              .021        .078         .22        .520        .066        .033        .005        .001*
SECONDARY CODE

                          33005L      04304L      48009L      24009L      82302L      80015L      34005L      23009L
                          ARSENIC     BERYLLIUM   CADMIUM     CHROMIUM    LEAD        MERCURY     SELENIUM    VANADIUM
                          TOTAL       EXTRBLE.    TOTAL       TOTAL       EXTRBLE.    TOTAL       TOTAL       TOTAL

                  SUBM    AS          BE          CD          CR          PB          HG          SE          V
                  ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            10(0)       10(10)      10(7)       10(0)       10(6)        9(9)       10(10)      10(4)
           LOW             .0006       L.001       L.001        .007       L.003       L.0001      L.0002       L.002
          HIGH             .0011       L.001        .003        .035        .012       L.0001      L.0002        .006
       AVERAGE             .0009                    .001*       .017        .005*                               .004*
      STD.DEV.             .0002                    .001*       .008        .003*                               .002*
   PERCNT:10TH             .0007       L.001       L.001        .009       L.003                   L.0002       L.002
          25TH             .0007       L.001       L.001        .010       L.003       L.0001      L.0002       L.002
    MEDIAN 50TH            .0009       L.001       L.001        .017       L.003       L.0001      L.0002        .004
          75TH             .0010       L.001        .002        .021        .006       L.0001      L.0002        .005
          90TH             .0011       L.001        .003        .029        .010                   L.0002        .006
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE   7                   NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 21AL05EB2000    LAT. 53D 35M 20S  LONG. 113D 21M 50S   PR 3   UTM 12 343550E 5940150N  FOR JUN 16, 1983 TO SEP 21, 1983
BREMNER SEWAGE LAGOONS                    FINAL EFFLUENT GRAB


                           02041L       10301L      97160S      97163S
                          SPECIFIC        PH       DISCHARGE   DISCHARGE
                          CONDUCT.                  INSTANT      DAILY
                                                                 MEAN
                   SUBM
                    ID      US/CM      PH UNITS      M3/S         CFS
SAMPLES(FLAGS)               5(0)        5(0)        5(0)        5(0)
           LOW              1336.         7.6        .2292      8.0923
          HIGH              1574.         8.0       1.3993      49.412
       AVERAGE              1468.                    .5394     19.0456
      STD.DEV.                94.                    .4896     17.2902
   PERCNT:10TH
          25TH              1417.         7.7        .2697      9.5227
   MEDIAN 50TH              1482.         7.8        .3241      11.444
          75TH              1531.         7.9        .4745      16.757
          90TH
SECONDARY CODE

                           08202L      08304L      06537L      06154L      06107L      06905L      10701L      97160S
                           OXYGEN      OXYGEN     PHENOLIC     CARBON      CARBON      CARBON     SURFACT.   DISCHARGE
                          BIOCHEM.      TOTAL     MATERIAL   DISSOLVED   DISSOLVED  PARTICULATE  N-ALKYL     INSTANT
                         DEMAND-BOD      COD                 INORGANIC    ORGANIC      TOTAL    SULPHNTS.
                   SUBM       O2         O2        PHENOL        C           C           C          LAS
                    ID      MG/L       MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)               5(0)        5(0)        5(0)        5(0)        5(0)        5(0)                    5(0)
           LOW               34.0       139.0        .028       120.0        22.0        7.63                   .2292
          HIGH              167.5       296.0        .454       150.0        53.0       45.92                  1.3993
       AVERAGE              114.5       240.8        .240       140.0        38.2       16.86                   .5394
      STD.DEV.               52.7        62.3        .198        12.2        11.3       16.46                   .4896
   PERCNT:10TH
          25TH               93.0       226.4        .033       140.0        34.0        7.87                   .2697
   MEDIAN 50TH              130.0       266.8        .306       140.0        41.0        8.80                   .3241
          75TH              148.0       276.0        .379       150.0        41.0       14.10                   .4745
          90TH
SECONDARY CODE

                           10151L      10101L      06301L      06201L      17203L      16306L      09107L      14102L
                         ALKALINITY  ALKALINITY   CARBONATE   BICARBONT.   CHLORIDE    SULPHATE    FLUORIDE     SILICA
                           PHENOL       TOTAL     (CALCD.)    (CALCD.)   DISSOLVED   DISSOLVED   DISSOLVED   REACTIVE
                         PHTHALEIN
                   SUBM     CACO3       CACO3        CO3        HCO3          CL         SO4          F         SIO2
                    ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)               5(0)        5(0)        5(0)        5(0)        5(0)        5(0)        5(0)        5(0)
           LOW                 .0        525.          0.        640.         54.         30.         .75        16.0
          HIGH                 .0        634.          0.        773.         69.        118.         .80        18.4
       AVERAGE                 .0        603.          0.        736.         62.         65.         .78        17.4
      STD.DEV.                 .0         45.          0.         54.          6.         41.         .02          .9
   PERCNT:10TH
          25TH                 .0        615.          0.        750.         58.         35.         .77        17.3
   MEDIAN 50TH                 .0        615.          0.        750.         61.         40.         .79        17.5
          75TH                 .0        628.          0.        766.         67.        100.         .80        17.8
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE   8                         NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                        INDUSTRIAL MONITORING
STATION 21AL05EB2000    LAT. 53D 35M 20S  LONG. 113D 21M 50S   PR 3   UTM 12 343550E 5940150N  FOR JUN 16, 1983 TO SEP 21, 1983
BREMNER SEWAGE LAGOONS                             FINAL EFFLUENT GRAB

                            10602L       20110L       12102L       11103L       19103L       06608L       15421L       97160S
                           HARDNESS      CALCIUM     MAGNESIUM     SODIUM      POTASSIUM     CYANIDE     PHOSPHORUS    DISCHARGE
                            TOTAL       DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED                   TOTAL        INSTANT
                           (CALCD.)
                    SUBM    CACO3          CA           MG           NA           K            CN           P
                     ID     MG/L          MG/L         MG/L         MG/L         MG/L         MG/L         MG/L          M3/S
SAMPLES(FLAGS)              5(0)          5(0)         5(0)         5(0)         5(0)         5(0)         5(0)          5(0)
           LOW              230.           64.          17.          76.         14.0         .004        7.000         .2292
          HIGH              349.           97.          27.          90.         18.0         .020       12.800        1.3993
       AVERAGE              294.           81.          22.          82.         16.5         .014        9.960         .5394
      STD.DEV.               52.           14.           4.           6.          1.5         .007        2.547         .4896
  PERCNT:10TH
          25TH              257.           70.          20.          77.         16.7         .011        7.750         .2697
   MEDIAN 50TH              291.           82.          21.          83.         17.0         .015       10.250         .3241
          75TH              341.           92.          26.          86.         17.0         .019       12.000         .4745
          90TH
SECONDARY CODE

                            07021L       07562L       07205L       07105L       07906L       97160S
                           NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     DISCHARGE
                            TOTAL       DISSOLVED    DISSOLVED    DISSOLVED   PARTICULATE    INSTANT
                           KJELDAHL     AMMONIA      NITRITE      NO3 & NO2     TOTAL
                    SUBM      N            N            N            N            N
                     ID     MG/L          MG/L         MG/L         MG/L         MG/L         M3/S
SAMPLES(FLAGS)              5(0)          5(0)         5(3)         5(3)         5(0)         5(0)
           LOW             50.000       38.300         L.05         L.05         1.33         .2292
          HIGH             101.00       90.600          .49          .42         9.48        1.3993
       AVERAGE             88.200       75.600         .142*        .128*        3.41         .5394
      STD.DEV.             21.534       21.464         .195*        .163*        3.44         .4896
  PERCNT:10TH
          25TH             95.000       77.100         L.05         L.05         1.59         .2697
   MEDIAN 50TH             95.000       84.000         L.05         L.05         1.80         .3241
          75TH             100.00       88.000          .07          .07         2.85         .4745
          90TH
SECONDARY CODE

                            10407L       10474L       10453L       00205L       36011L       36001L       36102L       36910L
                           RESIDUE      RESIDUE      RESIDUE       TOTAL       COLIFORMS    COLIFORMS     STREP.     STD. PLATE
                         NONFILTRABLE    TOTAL       FILTRABLE    DISSOLVED      FECAL        TOTAL        FECAL        COUNT
                                                                   SOLIDS                                             BACT.DENS.
                    SUBM                                                         MPN          MPN          MF
                     ID     MG/L         MG/L         MG/L         MG/L       NO/100ML     NO/100ML     NO/100ML        NO/ML
SAMPLES(FLAGS)                                                     5(0)         5(0)         5(0)         5(0)          5(0)
           LOW                                                     725.        13000.       13000.        3400.         5300.
          HIGH                                                     846.        41000.       58000.       94000.        75000.
       AVERAGE                                                     767.        24200.       44200.       40260.        33060.
      STD.DEV.                                                      46.        10733.       19753.       37942.        27447.
  PERCNT:10TH
          25TH                                                     750.        17000.       36000.        3900.        20000.
   MEDIAN 50TH                                                     756.        25000.       56000.       50000.        20000.
          75TH                                                     757.        25000.       58000.       50000.        45000.
          90TH
SECONDARY CODE
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REQUEST 0007 -  0009 PAGE   9                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 21AL05EB2000    LAT. 53D 35M 20S  LONG. 113D 21M 50S   PR 3   UTM 12 343550E 5940150N  FOR JUN 16, 1983 TO SEP 21, 1983
BREMNER SEWAGE LAGOONS                           FINAL EFFLUENT GRAB

                         29009L      30009L      26304L      13306L      25003L      28009L      42009L      27009L
                         COPPER      ZINC        IRON        ALUMINUM    MANGANESE   NICKEL      MOLYBDENUM  COBALT
                         TOTAL       TOTAL       EXTRBLE.    EXTRBLE.    TOTAL       TOTAL       TOTAL       TOTAL

                  SUBM   CU          ZN          FE          AL          MN          NI          MO          CO
                   ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           5(0)        5(0)        5(0)        5(0)        5(0)        5(0)        5(3)        5(2)
           LOW            .015        .003        .51         .020        .070        .010       L.001       L.001
          HIGH            .033        .045        .67         .300        .099        .017        .006        .003
       AVERAGE            .024        .027        .61         .177        .086        .014        .003*       .002*
      STD.DEV.            .007        .016        .06         .113        .011        .003        .002*       .001*
  PERCNT:10TH
          25TH            .018        .024        .61         .130        .082        .012       L.001       L.001
   MEDIAN 50TH            .025        .027        .61         .164        .084        .015       L.001        .003
          75TH            .027        .036        .66         .273        .094        .015        .004        .003
          90TH
SECONDARY CODE

                         33005L      04304L      48009L      24009L      82302L      80015L      34005L      23009L
                         ARSENIC     BERYLLIUM   CADMIUM     CHROMIUM    LEAD        MERCURY     SELENIUM    VANADIUM
                         TOTAL       EXTRBLE.    TOTAL       TOTAL       EXTRBLE.    TOTAL       TOTAL       TOTAL

                  SUBM   AS          BE          CD          CR          PB          HG          SE          V
                   ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           5(0)        5(5)        5(1)        5(0)        5(1)        5(4)        5(0)        5(1)
           LOW           .0014       L.001       L.001        .022       L.003       L.0001      .0004       L.002
          HIGH           .0020       L.001        .004        .062        .012        .0002      .0015        .007
       AVERAGE           .0017                    .002*       .038        .007*       .0001*     .0007        .004*
      STD.DEV.           .0002                    .001*       .017        .004*       .0000*     .0004        .002*
  PERCNT:10TH
          25TH           .0015       L.001        .002        .023        .004       L.0001      .0005        .003
   MEDIAN 50TH           .0017       L.001        .002        .036        .006       L.0001      .0006        .004
          75TH           .0017       L.001        .002        .049        .008       L.0001      .0006        .005
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  10                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                          INDUSTRIAL MONITORING
STATION 21AL05EB3000    LAT. 53D 38M  0S  LONG. 113D 38M  0S   FR 3   UTM 12 325900E 5945750N  FOR MAY 18, 1983 TO SEP 21, 1983
ST.ALBERT SEWAGE LAGOONS                         FINAL EFFLUENT GRAB

                            02041L        10301L        97160S        97163S
                           SPECIFIC         PH         DISCHARGE     DISCHARGE
                           CONDUCT.                     INSTANT        DAILY
                  SUBM                                                 MEAN
                   ID       US/CM        PH UNITS        M3/S           CFS
SAMPLES(FLAGS)               7(0)          7(0)          7(0)           7(0)
           LOW               932.           7.2          .1266         4.4687
          HIGH              1120.           7.7          .1754         6.1926
       AVERAGE              1025.                        .1407         4.9880
      STD.DEV.                80.                        .0174          .6098
   PERCNT:10TH
          25TH               968.           7.4          .1298         4.5836
   MEDIAN 50TH               975.           7.5          .1345         4.7507
          75TH              1116.           7.6          .1522         5.3752
          90TH
SECONDARY CODE

                            08202L        08304L        06537L        06154L        06107L        06905L        10701L        97160S
                            OXYGEN        OXYGEN       PHENOLIC       CARBON        CARBON        CARBON       SURFACT.      DISCHARGE
                           BIOCHEM.        TOTAL       MATERIAL      DISSOLVED     DISSOLVED    PARTICULATE    N-ALKYL        INSTANT
                          DEMAND-BOD        COD                      INORGANIC      ORGANIC        TOTAL      SULPHNTS.
                  SUBM        02            02          PHENOL           C             C             C           LAS
                   ID       MG/L          MG/L          MG/L           MG/L          MG/L          MG/L         MG/L          M3/S
SAMPLES(FLAGS)               7(0)          7(0)          7(0)           7(0)          7(0)          7(0)                       7(0)
           LOW               20.0          65.6          .014           63.0          12.0          4.50                      .1266
          HIGH               49.3         176.6          .206           76.0          25.0         20.92                      .1754
       AVERAGE               32.2         111.4          .071           69.4          18.6          9.70                      .1407
      STD.DEV.               11.6          38.4          .082            5.3           5.6          5.51                      .0174
   PERCNT:10TH
          25TH               23.0          73.5          .014           66.0          13.0          5.90                      .1298
   MEDIAN 50TH               28.5         108.5          .029           66.0          16.0          9.10                      .1345
          75TH               47.5         137.1          .171           75.0          24.0         11.00                      .1522
          90TH
SECONDARY CODE

                            10151L        10101L        06301L        06201L        17203L        16306L        09107L        14102L
                          ALKALINITY    ALKALINITY    CARBONATE     BICARBONT.     CHLORIDE      SULPHATE      FLUORIDE       SILICA
                            PHENOL         TOTAL       (CALCD.)       (CALCD.)     DISSOLVED     DISSOLVED     DISSOLVED     REACTIVE
                          PHTHALEIN
                  SUBM      CACO3         CACO3          CO3           HCO3           CL            SO4            F           SIO2
                   ID       MG/L          MG/L          MG/L           MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)               7(0)          7(0)          7(0)           7(0)          7(0)          7(0)          7(0)          7(0)
           LOW                 .0          249.            0.           304.           32.          104.           .67          12.5
          HIGH                 .0          312.            0.           380.           42.          265.           .98          14.3
       AVERAGE                 .0          278.            0.           339.           37.          174.           .84          13.2
      STD.DEV.                 .0           24.            0.            29.            4.           68.           .12            .6
   PERCNT:10TH
          25TH                 .0          252.            0.           307.           34.          110.           .73          12.8
   MEDIAN 50TH                 .0          272.            0.           332.           38.          175.           .84          13.2
          75TH                 .0          299.            0.           364.           41.          250.           .95          13.7
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  11                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 21AL05EB3000    LAT. 53D 38M  0S  LONG. 113D 38M  0S   PR 3   UTM 12 325900E 5945750N  FOR MAY 18, 1983 TO SEP 21, 1983
ST.ALBERT SEWAGE LAGOONS                        FINAL EFFLUENT GRAB

                           10602L      20110L      12102L      11103L      19103L      06608L      15421L      97160S
                          HARDNESS    CALCIUM     MAGNESIUM    SODIUM     POTASSIUM    CYANIDE    PHOSPHORUS  DISCHARGE
                            TOTAL     DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED                 TOTAL      INSTANT
                          (CALCD.)
                   SUBM     CACO3        CA          MG          NA          K           CN          P
                    ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)              7(0)        7(0)        7(0)        7(0)        7(0)        7(3)        7(0)        7(0)
           LOW              175.         47.         14.         58.         9.3        L.002       6.000       .1266
          HIGH              333.         92.         26.         73.        13.0         .014      10.300       .1754
       AVERAGE              249.         67.         20.         67.        11.0         .006*      8.157       .1407
      STD.DEV.               69.         19.          5.          5.         1.5         .005*      1.767       .0174
  PERCNT:10TH
          25TH              182.         48.         15.         65.         9.7        L.002       6.500       .1298
   MEDIAN 50TH              266.         70.         21.         68.        10.5         .003       7.750       .1345
          75TH              332.         90.         25.         72.        12.5         .010       9.800       .1522
          90TH
SECONDARY CODE

                           07021L      07562L      07205L      07105L      07906L       97160S
                          NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    DISCHARGE
                            TOTAL     DISSOLVED   DISSOLVED   DISSOLVED  PARTICULATE   INSTANT
                          KJELDAHL    AMMONIA      NITRITE    NO3 & NO2     TOTAL
                   SUBM       N           N           N           N           N
                    ID      MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)              7(0)        7(0)        7(3)        7(3)        7(0)        7(0)
           LOW            29.500      15.000        L.05        L.05         .60        .1266
          HIGH            45.000      36.200       21.00       21.00        4.90        .1754
       AVERAGE            37.171      27.886       3.376*      3.471*       2.36        .1407
      STD.DEV.             5.914       8.168       7.808*      7.792*       1.59        .0174
  PERCNT:10TH
          25TH            31.000      21.600        L.05        L.05        1.20        .1298
   MEDIAN 50TH            36.500      27.200         .16         .18        1.79        .1345
          75TH            43.500      35.600        2.12        2.75        4.20        .1522
          90TH
SECONDARY CODE

                           10407L      10474L      10453L      00205L      36011L      36001L      36102L      36910L
                          RESIDUE     RESIDUE     RESIDUE      TOTAL     COLIFORMS   COLIFORMS     STREP.   STD. PLATE
                        NONFILTRABLE   TOTAL     FILTRABLE   DISSOLVED     FECAL       TOTAL       FECAL       COUNT
                                                              SOLIDS                                         BACT.DENS.
                   SUBM                                                    MPN         MPN          MF
                    ID      MG/L        MG/L        MG/L        MG/L     NO/100ML    NO/100ML    NO/100ML      NO/ML
SAMPLES(FLAGS)                                                  7(0)        6(0)        5(0)        6(0)        5(1)
           LOW                                                  495.        630.       4800.         90.      14000.
          HIGH                                                  674.      79000.      89000.       4100.      99999.
       AVERAGE                                                  574.      21855.      33560.       1620.      72800.*
      STD.DEV.                                                   63.      29365.      33870.       1678.      35344.*
  PERCNT:10TH
          25TH                                                  525.       2600.      16000.        430.      70000.
   MEDIAN 50TH                                                  571.      11950.      16000.        900.      80000.
          75TH                                                  630.      25000.      42000.       3300.     G99999.
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  12                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 21AL05EB3000    LAT. 53D 38M  0S  LONG. 113D 38M  0S   PR 3   UTM 12 325900E 5945750N  FOR MAY 18, 1983 TO SEP 21, 1983
ST.ALBERT SEWAGE LAGOONS                              FINAL EFFLUENT GRAB

                         29009L     30009L     26304L     13306L     25003L     28009L     42009L      27009L
                         COPPER      ZINC       IRON     ALUMINUM   MANGANESE   NICKEL   MOLYBDENUM    COBALT
                          TOTAL      TOTAL    EXTRBLE.   EXTRBLE.    TOTAL      TOTAL      TOTAL       TOTAL

                  SUBM     CU         ZN         FE         AL         MN         NI         MO          CO
                   ID     MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L        MG/L
SAMPLES(FLAGS)            7(0)       7(0)       7(0)       7(0)       7(0)       6(0)       7(4)        7(7)
           LOW            .004       .007       .18        .050       .051       .005       L.001       L.001
          HIGH            .014       .020       .43        .200       .139       .013       .005        L.001
       AVERAGE            .009       .015       .32        .104       .081       .008       .002*
      STD.DEV.            .004       .005       .11        .062       .029       .004       .002*
   PERCNT:10TH
          25TH            .005       .011       .21        .050       .062       .005       L.001       L.001
   MEDIAN 50TH            .008       .017       .35        .075       .080       .006       L.001       L.001
          75TH            .013       .019       .41        .160       .089       .013       .004        L.001
          90TH
SECONDARY CODE

                         33005L     04304L     48009L     24009L     82302L     80015L     34005L      23009L
                         ARSENIC   BERYLLIUM   CADMIUM   CHROMIUM     LEAD     MERCURY    SELENIUM    VANADIUM
                          TOTAL    EXTRBLE.     TOTAL      TOTAL    EXTRBLE.    TOTAL      TOTAL       TOTAL

                  SUBM     AS         BE         CD         CR         FB         HG         SE          V
                   ID     MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L        MG/L
SAMPLES(FLAGS)            6(0)       7(7)       7(5)       7(1)       7(6)       7(6)       7(0)        7(2)
           LOW            .0011      L.001      L.001      L.001      L.003      L.0001     .0003       L.002
          HIGH            .0016      L.001      .002       .044       .008       .0001      .0013       .006
       AVERAGE            .0013                 .001*      .009*      .004*      .0001*     .0008       .003*
      STD.DEV.            .0002                 .000*      .015*      .002*      .0000*     .0003       .001*
   PERCNT:10TH
          25TH            .0011      L.001      L.001      .003       L.003      L.0001     .0005       L.002
   MEDIAN 50TH            .0013      L.001      L.001      .004       L.003      L.0001     .0008       .003
          75TH            .0014      L.001      .001       .005       L.003      L.0001     .0009       .004
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  13                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 21AL05EB4000    LAT. 53D 44M 50S  LONG. 113D 11M 45S   PR 3   UTM 12 355200E 5957400N  FOR MAY 18, 1983 TO SEP 21, 1983
FT.SASKATCHEWAN SEWAGE LAGOONS                 FINAL EFFLUENT GRAB

                            02041L       10301L       97160S       97163S
                           SPECIFIC        PH        DISCHARGE    DISCHARGE
                           CONDUCT.                    INSTANT       DAILY
                                                                      MEAN
                      SUBM
                       ID   US/CM       PH UNITS      M3/S           CFS
 SAMPLES(FLAGS)              8(0)         8(0)        8(0)          8(0)
            LOW              858.          6.8        .0284        1.2350
           HIGH             1072.          7.4        .0407        1.4364
        AVERAGE              928.                     .0364        1.3283
       STD.DEV.               64.                     .0038         .0751
    PERCNT:10TH
           25TH              890.          7.0        .0353        1.2617
    MEDIAN 50TH              921.          7.2        .0363        1.3275
           75TH              936.          7.3        .0393        1.3884
           90TH
 SECONDARY CODE

                           08202L       08304L      06537L       06154L       06107L       06905L        10701L        97160S
                           OXYGEN       OXYGEN      PHENOLIC     CARBON       CARBON       CARBON        SURFACT.     DISCHARGE
                           BIOCHEM.      TOTAL      MATERIAL     DISSOLVED    DISSOLVED    PARTICULATE   N-ALKYL        INSTANT
                           DEMAND-BOD     COD                    INORGANIC    ORGANIC       TOTAL        SULPHNTS.
                      SUBM    02          02         PHENOL         C            C            C            LAS
                       ID  MG/L         MG/L        MG/L         MG/L         MG/L         MG/L          MG/L          M3/S
 SAMPLES(FLAGS)             8(0)         8(0)        8(0)         8(0)         8(0)         8(0)                       8(0)
            LOW             80.0        202.1        .119         72.0         18.0        12.60                       .0284
           HIGH            186.7        396.9        .202         97.0         56.0        41.00                       .0407
        AVERAGE            145.4        282.8        .162         81.0         32.9        22.51                       .0364
       STD.DEV.             38.0         73.0        .035          9.1         12.2        10.72                       .0038
    PERCNT:10TH
           25TH            115.0        216.5        .132         73.5         26.5        13.57                       .0353
    MEDIAN 50TH            164.6        268.5        .162         79.5         27.0        19.75                       .0363
           75TH            168.5        346.5        .193         86.5         41.0        29.91                       .0393
           90TH
 SECONDARY CODE

                           10151L       10101L       06301L       06201L       17203L       16306L       09107L       14102L
                          ALKALINITY   ALKALINITY   CARBONATE    BICARBONT.   CHLORIDE     SULPHATE     FLUORIDE      SILICA
                           PHENOL        TOTAL      (CALCD.)      (CALCD.)    DISSOLVED    DISSOLVED    DISSOLVED    REACTIVE
                          PHTHALEIN
                      SUBM  CACO3        CACO3        CO3         HCO3          CL           SO4           F          SIO2
                       ID   MG/L         MG/L        MG/L        MG/L          MG/L         MG/L         MG/L         MG/L
 SAMPLES(FLAGS)             8(0)         8(0)        8(0)         8(0)         8(0)         8(0)         8(0)         8(0)
            LOW               .0         214.          0.         261.          42.          50.          .70         12.8
           HIGH               .0         321.          0.         391.          49.         240.          .92         21.9
        AVERAGE               .0         299.          0.         364.          45.          82.          .81         14.9
       STD.DEV.               .0          35.          0.          43.           2.          65.          .08          2.9
    PERCNT:10TH
           25TH               .0         304.          0.         370.          44.          50.          .74         13.5
    MEDIAN 50TH               .0         310.          0.         377.          45.          60.          .81         14.0
           75TH               .0         315.          0.         384.          46.          73.          .87         14.8
           90TH
 SECONDARY CODE
 * THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  14                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 21AL05EB4000    LAT. 53D 44M 50S  LONG. 113D 11M 45S   PR 3   UTM 12 355200E 5957400N  FOR MAY 18, 1983 TO SEP 21, 1983
FT.SASKATCHEWAN SEWAGE LAGOONS          FINAL EFFLUENT GRAB

                        10602L        20110L        12102L        11103L        19103L        06608L        15421L        97160S
                      HARDNESS       CALCIUM     MAGNESIUM        SODIUM     POTASSIUM       CYANIDE    PHOSPHORUS     DISCHARGE
                         TOTAL     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED                       TOTAL       INSTANT
                      (CALCD.)
              SUBM       CACO3            CA            MG            NA             K            CN             P
                 ID       MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)            8(0)          8(0)          8(0)          8(0)          8(0)          8(0)          8(0)          8(0)
           LOW            137.           35.           12.           60.          11.2          .009         7.250         .0284
          HIGH            273.           83.           17.           76.          14.0          .020        10.300         .0407
       AVERAGE            182.           48.           15.           67.          12.2          .014         8.725         .0364
      STD.DEV.             43.           15.            2.            6.           1.0          .003         1.041         .0038
   PERCNT:10TH
          25TH            154.           39.           14.           62.          11.5          .012         8.000         .0353
   MEDIAN 50TH            170.           44.           16.           67.          11.8          .014         8.500         .0363
          75TH            200.           52.           17.           72.          13.0          .015         9.625         .0393
          90TH
SECONDARY CODE

                        07021L        07562L        07205L        07105L        07906L        97160S
                      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN     DISCHARGE
                         TOTAL     DISSOLVED     DISSOLVED     DISSOLVED   PARTICULATE       INSTANT
                      KJELDAHL       AMMONIA       NITRITE     NO3 & NO2         TOTAL
              SUBM           N             N             N             N             N
                 ID       MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)            8(0)          8(0)          8(7)          8(7)          8(0)          8(0)
           LOW          36.500        27.000          L.05         L.050          1.15         .0284
          HIGH          47.500        37.950           .17           .17          6.40         .0407
       AVERAGE          41.187        32.856          .065*         .065*         3.45         .0364
      STD.DEV.           3.916         4.307          .042*         .042*         1.81         .0038
   PERCNT:10TH
          25TH          37.750        29.500         L.050         L.050          1.98         .0353
   MEDIAN 50TH          41.100        32.450         L.050         L.050          3.35         .0363
          75TH          43.900        37.000         L.050         L.050          4.70         .0393
          90TH
SECONDARY CODE

                        10407L        10474L        10453L        00205L        36011L        36001L        36102L        36910L
                       RESIDUE       RESIDUE       RESIDUE         TOTAL     COLIFORMS     COLIFORMS        STREP.    STD. PLATE
                    NONFILTRABLE         TOTAL     FILTRABLE     DISSOLVED         FECAL         TOTAL         FECAL         COUNT
                                                                  SOLIDS                                              BACT.DENS.
              SUBM                                                                 MPN           MPN            MF
                 ID       MG/L          MG/L          MG/L          MG/L     NO/100ML     NO/100ML     NO/100ML         NO/ML
SAMPLES(FLAGS)                                                      8(0)          8(0)          8(2)          8(0)          8(0)
           LOW                                                      415.        10000.        12000.         3000.        12000.
          HIGH                                                     1164.        56000.        99999.        32000.        98000.
       AVERAGE                                                      557.        35750.        77625.*       14738.        49000.
      STD.DEV.                                                      253.        16816.        33444.*        8935.        34744.
   PERCNT:10TH
          25TH                                                      440.        24000.        59000.         8950.        18000.
   MEDIAN 50TH                                                      461.        33500.        95500.        13000.        44000.
          75TH                                                      540.        52500.        99999.        19500.        79000.
          90TH
SECONDARY CODE
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REQUEST 0007 -  0009 PAGE  15                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 21AL05EB4000    LAT. 53D 44M 50S  LONG. 113D 11M 45S   PR 3   UTM 12 355200E 5957400N  FOR MAY 18, 1983 TO SEP 21, 1983
FT.SASKATCHEWAN SEWAGE LAGOONS              FINAL EFFLUENT GRAB

                            29009L      30009L      26304L      13306L      25003L      28009L      42009L      27009L
                            COPPER       ZINC        IRON      ALUMINUM   MANGANESE     NICKEL    MOLYBDENUM    COBALT
                             TOTAL      TOTAL      EXTRBLE.    EXTRBLE.     TOTAL       TOTAL       TOTAL       TOTAL

                    SUBM      CU          ZN          FE          AL          MN          NI          MO          CO
                     ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)               8(0)        8(0)        8(0)        8(0)        8(0)        8(0)        8(1)        8(1)
           LOW               .023        .041        1.42        .431        .072        .011       L.001       L.001
          HIGH               .919        .090       31.50       1.000        .368        .327        .158        .044
       AVERAGE               .275        .063       10.81        .574        .172        .098        .045*       .013*
      STD.DEV.               .327        .020       12.51        .182        .118        .119        .063*       .014*
  PERCNT:10TH
          25TH               .065        .044        2.91        .478        .086        .023        .009        .005
   MEDIAN 50TH               .150        .063        3.68        .511        .111        .047        .013        .008
          75TH               .414        .080       20.18        .590        .270        .154        .078        .018
          90TH
SECONDARY CODE

                            33005L      04304L      48009L      24009L      82302L      80015L      34005L      23009L
                            ARSENIC    BERYLLIUM    CADMIUM    CHROMIUM      LEAD       MERCURY    SELENIUM    VANADIUM
                            TOTAL       EXTRBLE.    TOTAL       TOTAL      EXTRBLE.     TOTAL      TOTAL        TOTAL

                    SUBM      AS          BE          CD          CR          PB          HG          SE          V
                     ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)               8(0)        8(8)        8(3)        8(0)        8(0)        8(8)        8(6)        8(1)
           LOW              .0017       L.001       L.001        .005        .005      L.0001      L.0002       L.002
          HIGH              .0900       L.001        .003        .184        .025      L.0001       .0006        .080
       AVERAGE              .0265                    .002*       .061        .013                  .0003*       .025*
      STD.DEV.              .0351                    .001*       .074        .008                  .0001*       .031*
  PERCNT:10TH
          25TH              .0050       L.001       L.001        .014        .008      L.0001      L.0002        .005
   MEDIAN 50TH              .0107       L.001        .002        .024        .011      L.0001      L.0002        .009
          75TH              .0443       L.001        .002        .112        .019      L.0001       .0002*       .044
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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SECTION 3

NAQUADAT Summary Reports for analyses of final effluent grab samples from industries licensed to discharge wastewater into the study section of the North Saskatchewan river.

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REQUEST 0001 -  0003 PAGE   1                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB0500    LAT. 53D 32M  2S  LONG. 113D 23M 32S   PR 3   UTM 12 341450E 5934100N  FOR APR 29, 1980 TO APR 12, 1984
THE STEEL COMPANY OF CANADA LTD EDM        FINAL EFFLUENT GRAB
NW30/SW31 T52 R23 W4M

                           02061F       10301L       10301F       10151L       10101L       02041L       97160S       97163S
                         TEMPERATURE      PH           PH       ALKALINITY   ALKALINITY    SPECIFIC    DISCHARGE    DISCHARGE
                          OF WATER                                PHENOL       TOTAL       CONDUCT.     INSTANT       DAILY
                                                                PHTHALEIN                                              MEAN
                    SUBM                                          CACO3        CACO3
                     ID    DEG.C       PH UNITS     PH UNITS      MG/L         MG/L        US/CM         M3/S          CFS
SAMPLES(FLAGS)             16(0)       16(0)         2(0)        16(1)        16(0)        16(0)                      15(0)
           LOW               2.0         7.19        7.9            .0          74.         597.                       .008
          HIGH              21.0         8.4         8.3           4.2         230.        1115.                      2.67
       AVERAGE              12.4                                    .3*        143.7        946.                       .8439
      STD.DEV.               6.4                                   1.0*         42.0        155.                       .6395
  PERCNT:10TH                3.0         7.3                        .0          82.         730.                       .22
          25TH               8.0         7.55                       .0         120.0        835.                       .52
   MEDIAN 50TH              11.5         7.90        8.10           .0         133.5       1005.                       .66
          75TH              18.0         8.00                       .0         173.5       1054.                      1.31
          90TH              20.0         8.0                       L.5         194.        1096.                      1.43
SECONDARY CODE

                           06201L       06202L       06301L       20103L       20105L       10602L       10604L       97160S
                         BICARBONT.   BICARBONT.   CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS    DISCHARGE
                           (CALCD.)    (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED      TOTAL        TOTAL       INSTANT
                                                                             (CALCD.)     (CALCD.)
                    SUBM    HCO3         HCO3         CO3           CA           CA         CACO3        CACO3
                     ID   MG/L          MG/L         MG/L          MG/L         MG/L         MG/L         MG/L         M3/S
SAMPLES(FLAGS)             16(1)        4(0)        16(1)        15(0)         2(0)        11(0)         5(0)
           LOW               90.         145.           0.          55.          63.9        201.6        271.
          HIGH              280.         221.           5.          93.          63.9        356.2        405.
       AVERAGE              174.*        176.           0.*         68.7         63.9        258.4        321.6
      STD.DEV.               52.*         36.           1.*         12.7           .0         53.7         65.8
  PERCNT:10TH               100.                        0.          56.                      203.2
          25TH              142.         147.           0.          57.                      216.4        271.3
   MEDIAN 50TH              163.         169.           0.          64.0         63.9        240.4        279.8
          75TH              211.         205.           0.          80.0                     300.8        381.
          90TH              236.                       Q1.          91.                      342.2
SECONDARY CODE                                              11L 10L

                           11103L       12102L       19103L       09107L       17203L       16306L       26009L       26304L
                           SODIUM      MAGNESIUM    POTASSIUM    FLUORIDE     CHLORIDE     SULPHATE       IRON         IRON
                         DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL       EXTRBLE.

                    SUBM     NA           MG            K            F           CL          SO4           FE           FE
                     ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             16(0)       16(0)        16(0)        16(0)        16(0)        16(0)         4(1)        12(0)
           LOW               21.          15.          3.7          .39          16.         120.         L.01          .07
          HIGH              118.8         42.         40.0          2.0         108.5        355.0          .48          .55
       AVERAGE               79.0         26.1        20.01        1.122        68.59        246.0          .200*        .226
      STD.DEV.               29.1          8.1        11.82         .375        28.29         62.5          .201*        .138
  PERCNT:10TH                41.          16.          4.4          .57          26.         175.                       .08
          25TH               58.5         20.5        10.15         .940        44.00        195.0          .065*        .110
   MEDIAN 50TH               76.8         23.5        18.50        1.135        72.00        250.0          .155         .215
          75TH              104.5         32.0        29.00        1.335        91.50        292.4          .335         .295
          90TH              115.          38.0        39.5         1.47        104.          314.9                       .35
SECONDARY CODE             11L          11L          11L          06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE   2                   NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 20AL05EB0500     LAT. 53D 32M  2S  LONG. 113D 23M 32S   PR 3   UTM 12 341450E 5934100N  FOR APR 29, 1980 TO APR 12, 1984
THE STEEL COMPANY OF CANADA LTD EDM        FINAL EFFLUENT GRAB
NW30/SW31 T52 R23 W4M

                          07105L      07205L      07562L      07021L      07906L       07905L      15421L      97160S
                         NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN     NITROGEN    PHOSPHORUS  DISCHARGE
                         DISSOLVED   DISSOLVED   DISSOLVED    TOTAL     PARTICULATE  PARTICULATE   TOTAL      INSTANT
                         NO3 & NO2   NITRITE     AMMONIA     KJELDAHL     TOTAL       (CALCD.)
                 SUBM       N           N           N           N           N            N           P
                  ID       MG/L        MG/L        MG/L        MG/L        MG/L         MG/L        MG/L        M3/S
SAMPLES(FLAGS)            16(12)      15(13)      16(2)       16(0)       10(2)                   16(0)
           LOW            L.003       L.02         .014        .850       L.01                      .02
          HIGH             .15         .08        1.10        2.150        .950                     .310
       AVERAGE             .061*       .049*       .326*      1.441        .321*                    .117
      STD.DEV.             .041*       .015*       .319*       .410        .334*                    .065
  PERCNT:10TH             L.02        L.02         .027        .910       L.010                     .061
          25TH            L.050       L.05        L.050       1.025        .03                      .088
   MEDIAN 50TH            L.050       L.05         .239       1.520        .260                     .100
          75TH             .060*      L.05         .558       1.775        .45                      .125
          90TH             .14         .07         .67        1.889        .875                     .185
SECONDARY CODE                                    61L         15L                                19L 06L

                          10474L      10407L      10511L      10453L      14101L       97160S      97163S
                         RESIDUE     RESIDUE     RESIDUE     RESIDUE      SILICA      DISCHARGE   DISCHARGE
                          TOTAL    NONFILTRABLE  VOLATILE   FILTRABLE    REACTIVE      INSTANT      DAILY
                                                NONFILTR.                                           MEAN
                 SUBM                           (CALCD.)                  SIO2
                  ID       MG/L        MG/L        MG/L        MG/L        MG/L         M3/S         CFS
SAMPLES(FLAGS)            15(0)       16(0)       1(1)        11(0)       16(0)                    15(0)
           LOW             469.         1.          Q.4         460.         4.3                     .008
          HIGH             974.        23.          Q.4         870.        10.7                    2.67
       AVERAGE             725.9       10.4                     688.6        7.42                    .8439
      STD.DEV.             135.8        5.0                     135.0        2.00                    .6395
  PERCNT:10TH              487.         7.                      480.         4.4                     .22
          25TH             650.0        8.0                     570.         6.05                    .52
   MEDIAN 50TH             761.         9.0                     735.         7.10                    .66
          75TH             788.        11.5                     780.         9.25                   1.31
          90TH             877.        18.                      820.        10.4                    1.43
SECONDARY CODE            71L         01L                     51L         02L

                          00205L      02074L      06537L      06524L      02001L       16101L      10701L      06608L
                          TOTAL      TURBIDITY    PHENOLIC    OIL AND      ODOUR       SULPHIDE    SURFACT.     CYANIDE
                         DISSOLVED                MATERIAL    GREASE     THRESHOLD     DISSOLVED   N-ALKYL
                          SOLIDS                                          NUMBER                   SULPHNTS.
                 SUBM                             PHENOL                                  S          LAS          CN
                  ID       MG/L        NTU         MG/L        MG/L         TON          MG/L        MG/L        MG/L
SAMPLES(FLAGS)            15(0)       14(1)       16(0)       16(0)        7(0)                    14(1)        4(3)
           LOW             339.        L.1         .005         .3           1.                    L.01        L.002
          HIGH             964.       32.0         .023       13.6          10.                    1.44        L.02
       AVERAGE             611.7       7.2*        .013        2.731         4.                     .425*       .0080*
      STD.DEV.             160.2       8.5*        .005        3.510         4.                     .478*       .0085*
  PERCNT:10TH              434.        1.0         .006         .5                                  .02
          25TH             459.        2.0         .009         .550         1.                     .15        L.0020
   MEDIAN 50TH             627.        3.8         .013        1.100         1.                     .220        .0050*
          75TH             710.       13.0         .016        3.850        10.                     .40         .0140*
          90TH             786.0      14.0         .021        6.                                  1.43
SECONDARY CODE                                                21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE   3                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB0500    LAT. 53D 32M  2S  LONG. 113D 23M 32S   PR 3   UTM 12 341450E 5934100N  FOR APR 29, 1980 TO APR 12, 1984
THE STEEL COMPANY OF CANADA LTD EDM        FINAL EFFLUENT GRAB
NW30/SW31 T52 R23 W4M

                        08304L     08202L     06107L     06154L     06001L     06051L     06006L     06905L
                        OXYGEN     OXYGEN     CARBON     CARBON     CARBON     CARBON     CARBON     CARBON
                        TOTAL      BIOCHEM.   DISSOLVED  DISSOLVED  TOTAL      TOTAL      TOTAL      PARTICULATE
                        COD        DEMAND-BOD ORGANIC    INORGANIC  ORGANIC    INORGANIC             TOTAL
                  SUBM  02         02         C          C          C          C          C          C
                   ID   MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)          16(0)      4(0)       11(0)      10(0)      6(0)       2(0)       1(0)       10(1)
           LOW          25.1       3.4        5.6        14.        7.         21.0       31.        L.01
          HIGH          173.       13.4       21.0       53.8       41.1       24.        31.        4.86
       AVERAGE          70.3       8.92       15.31      33.87      19.38      22.50                 2.37*
      STD.DEV.          40.0       4.29       5.33       12.54      11.68      2.12                  1.55*
   PERCNT:10TH          38.0                  9.5        15.00                                        .36*
          25TH          41.1       5.70       10.        28.0       14.5                             1.34
   MEDIAN 50TH          62.5       9.45       18.        34.50      15.85      22.50                 2.14
          75TH          81.5       12.15      19.4       42.0       22.0                             3.41
          90TH          149.                  21.0       49.90                                        4.62
SECONDARY CODE          01L                   01L                   05L 07L    52L

                        24101L     24009L     24302L     80015L     80011L     27009L     27302L     47304L
                        CHROMIUM   CHROMIUM   CHROMIUM   MERCURY    MERCURY    COBALT     COBALT     SILVER
                        HEXAVALENT TOTAL      EXTRBLE.   TOTAL      TOTAL      TOTAL      EXTRBLE.   EXTRBLE.

                  SUBM  CR         CR         CR         HG         HG         CO         CO         AG
                   ID   MG/L       MG/L       MG/L       MG/L       UG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)          14(14)     15(5)                 14(12)     2(2)       15(12)     1(1)       4(4)
           LOW          L.001      L.001                 L.0001     L.02       L.001      L.001      L.02
          HIGH          L.01       .014                  .0013      L.02       L.01       L.001      L.02
       AVERAGE                     .008*                 .0002*                .004*
      STD.DEV.                     .003*                 .0003*                .004*
   PERCNT:10TH          L.001      .005                  L.0001                L.001
          25TH          L.001      .006                  L.0001                L.001                 L.020
   MEDIAN 50TH          L.001      L.01                  L.0001     L.020      L.001                 L.020
          75TH          L.01       .010                  L.0001                L.01                  L.020
          90TH          L.01       .012                  .0005                 L.01
SECONDARY CODE

                        29009L     29305L     28009L     28302L     48009L     48302L     82009L     82302L
                        COPPER     COPPER     NICKEL     NICKEL     CADMIUM    CADMIUM    LEAD       LEAD
                        TOTAL      EXTRBLE.   TOTAL      EXTRBLE.   TOTAL      EXTRBLE.   TOTAL      EXTRBLE.

                  SUBM  CU         CU         NI         NI         CD         CD         PB         PB
                   ID   MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)          15(3)      1(0)       15(3)      1(0)       14(13)     1(1)       6(2)       10(6)
           LOW          .002       .004       .010       .014       L.001      L.001      L.003      L.002
          HIGH          .014       .004       .031       .014       L.01       L.001      .017       L.02
       AVERAGE          .008*                 .017*                 .004*                 .007*      .012*
      STD.DEV.          .004*                 .005*                 .004*                 .006*      .008*
   PERCNT:10TH          .003                  .011                  L.001                            L.002
          25TH          L.005                 .013                  L.001                 L.003      .005
   MEDIAN 50TH          .006                  .016                  L.001                 .005       .011
          75TH          .011                  L.02                  L.01                  .010       L.02
          90TH          .013                  .020                  L.01                             L.020
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 - 0012 PAGE 4

NAQUADAT SUMMARY REPORT JAN 08, 1986
INDUSTRIAL MONITORING

STATION 20AL05EB0500 LAT. 53D 32M 2S LONG. 113D 23M 32S PR 3 UTM 12 341450E 5934100N FOR APR 29, 1980 TO APR 12, 1984
THE STEEL COMPANY OF CANADA LTD EDM FINAL EFFLUENT GRAB
NW30/SW31 T52 R23 W4M

	30009L ZINC TOTAL	30305L ZINC EXTRBLE.	25003L MANGANESE TOTAL	25304L MANGANESE EXTRBLE.	23009L VANADIUM TOTAL	42304L MOLYBDENUM EXTRBLE.	42009L MOLYBDENUM TOTAL	51003L ANTIMONY TOTAL
SUBM	ZN	ZN	MN	MN	V	MO	MO	SB
ID	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
SAMPLES(FLAGS)	15(1)	1(0)	15(0)	1(0)	14(4)		12(0)	4(2)
LOW	.009	.017	.064	.260	.003		.03	L.001
HIGH	.059	.017	.478	.260	.011		.123	.012
AVERAGE	.028*		.205		.008*		.074	.0060*
STD.DEV.	.014*		.111		.003*		.035	.0058*
PERCNT:10TH	.011		.072		.005		.037	
25TH	.017		.109		.005		.041	L.0010
MEDIAN 50TH	.026		.182		.007		.062	.0055*
75TH	.04		.282		L.01		.107	.0110
90TH	.048		.313		.011		.122	
SECONDARY CODE					02L			

	33005L ARSENIC TOTAL	33104L ARSENIC DISSOLVED	34005L SELENIUM TOTAL	34102L SELENIUM DISSOLVED	13111L ALUMINUM DISSOLVED	13306L ALUMINUM EXTRBLE.	04102L BERYLLIUM DISSOLVED	04304L BERYLLIUM EXTRBLE.
SUBM	AS	AS	SE	SE	AL	AL	BE	BE
ID	MG/L	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L	MG/L
SAMPLES(FLAGS)	6(2)	1(0)	6(3)	1(0)	4(0)	10(1)	4(4)	10(9)
LOW	L.001	.0022	L.0002	.0005	100.	L.020	L.005	L.001
HIGH	.020	.0022	.019	.0005	310.	.284	L.005	.003
AVERAGE	.0059*		.0044*		165.00	.129*		.001*
STD.DEV.	.0072*		.0074*		99.50	.092*		.001*
PERCNT:10TH						.032*		L.001
25TH	L.001		.0004		100.00	.060	L.005	L.001
MEDIAN 50TH	.0037		L.0010		125.00	.089	L.005	L.001
75TH	.006		.0048		230.00	.21	L.005	L.001
90TH						.261		.002*
SECONDARY CODE			07L			02L		02L

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0001 -  0003 PAGE   5                 NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                               INDUSTRIAL MONITORING
STATION 20AL05EB0501    LAT. 53D 32M  2S  LONG. 113D 23M 32S   PR 3   UTM 12 341450E 5934100N  FOR MAY 05, 1981 TO AUG 16, 1983
THE STEEL COMPANY OF CANADA LTD EDM       FINAL EFFLUENT COMP
NW30/SW31 T52 R23 W4M

                        02061F       10301L       10301F       10151L       10101L       02041L       97160S       97163S
                      TEMPERATURE      PH           PH       ALKALINITY   ALKALINITY    SPECIFIC    DISCHARGE    DISCHARGE
                       OF WATER                                PHENOL       TOTAL       CONDUCT.     INSTANT       DAILY
                                                             PHTHALEIN                                              MEAN
                   SUBM                                        CACO3        CACO3
                    ID   DEG.C      PH UNITS     PH UNITS      MG/L         MG/L         US/CM        M3/S          CFS
SAMPLES(FLAGS)                        4(0)         1(0)        4(0)         4(0)         4(0)                       4(0)
           LOW                        7.20         8.1           .0          75.         980.                        .52
          HIGH                        8.1          8.1           .0         231.        1090.                       1.35
       AVERAGE                                                   .0         137.8       1036.                        .9500
      STD.DEV.                                                   .0          66.1         45.                        .4410
   PERCNT:10TH
          25TH                        7.20                       .0          97.5       1005.                        .5700
   MEDIAN 50TH                        7.25                       .0         122.5       1036.                        .9650
          75TH                        7.70                       .0         178.0       1066.                       1.3300
          90TH
SECONDARY CODE

                        06201L       06202L       06301L       20103L       20105L       10602L       10604L       97160S
                      BICARBONT.   BICARBONT.    CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS    DISCHARGE
                       (CALCD.)     (CALCD.)     (CALCD.)     DISSOLVED    DISSOLVED     TOTAL        TOTAL       INSTANT
                                                                           (CALCD.)     (CALCD.)
                   SUBM   HCO3         HCO3         CO3           CA           CA         CACO3        CACO3
                    ID   MG/L          MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         M3/S
SAMPLES(FLAGS)            4(0)         1(0)         4(0)         4(0)                      2(0)         2(0)
           LOW             91.         147.           0.          53.                      198.2        268.2
          HIGH            282.         147.           0.          95.                      215.6        425.
       AVERAGE            168.                        0.          68.6                     206.9        346.6
      STD.DEV.             81.                        0.          19.4                      12.3        110.9
   PERCNT:10TH
          25TH            119.                        0.          54.0
   MEDIAN 50TH            149.                        0.          63.1                     206.9        346.6
          75TH            217.                        0.          83.1
          90TH
SECONDARY CODE                                      11L 10L

                        11103L       12102L       19103L       09107L       17203L       16306L       26009L       26304L
                        SODIUM      MAGNESIUM    POTASSIUM     FLUORIDE     CHLORIDE     SULPHATE      IRON         IRON
                       DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED     TOTAL       EXTRBLE.

                   SUBM    NA           MG           K            F            CL           SO4          FE           FE
                    ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            4(0)         4(0)         4(0)         4(0)         4(0)         4(0)         2(0)         2(0)
           LOW             99.          16.          18.          .50          21.         240.          .15          .08
          HIGH            119.5         46.          39.0         1.6         105.5        312.8         .16          .22
       AVERAGE            109.1         25.7         29.07        1.067        79.13       278.7         .155         .150
      STD.DEV.              8.4         13.7          8.81         .465        39.28        29.8         .007         .099
   PERCNT:10TH
          25TH            103.5         17.5         22.65         .720        55.50       260.0
   MEDIAN 50TH            109.0         20.4         29.65        1.085        95.00       281.0         .155         .150
          75TH            114.8         33.9         35.50        1.415       102.75       297.4
          90TH
SECONDARY CODE       11L          11L          11L          06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE   6                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                    INDUSTRIAL MONITORING
STATION 20AL05EB0501    LAT. 53D 32M  25  LONG. 113D 23M 32S   PR 3   UTM 12 341450E 5934100N  FOR MAY 05, 1981 TO AUG 16, 1983
THE STEEL COMPANY OF CANADA LTD EDM       FINAL EFFLUENT COMP
NW30/SW31 T52 R23 W4M

                       07105L        07205L        07562L        07021L        07906L        07905L        15421L        97160S
                       NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      PHOSPHORUS    DISCHARGE
                       DISSOLVED     DISSOLVED     DISSOLVED     TOTAL         PARTICULATE   PARTICULATE   TOTAL         INSTANT
                       NO3 & NO2     NITRITE       AMMONIA       KJELDAHL      TOTAL         (CALCD.)
               SUBM    N             N             N             N             N             N             P
                ID     MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)              4(3)          4(3)          4(1)          4(0)          2(0)                        4(0)
           LOW              L.02          L.02          L.05           .90           .39                        .060
          HIGH               .14           .06          .468         1.900           .46                         .16
       AVERAGE             .065*         .045*         .256*         1.400          .425                        .110
      STD.DEV.             .052*         .017*         .235*          .523          .049                        .041
   PERCNT:10TH
          25TH             L.035         L.035         .052*          .950                                      .084
   MEDIAN 50TH             L.050         L.050          .252         1.400          .425                        .109
          75TH             .095*         .055*          .459         1.850                                      .135
          90TH
SECONDARY CODE                                           61L           15L                                       19L

                       10474L        10407L        10511L        10453L        14101L        97160S        97163S
                       RESIDUE       RESIDUE       RESIDUE       RESIDUE       SILICA        DISCHARGE     DISCHARGE
                       TOTAL         NONFILTRABLE  VOLATILE      FILTRABLE     REACTIVE      INSTANT       DAILY
                                                   NONFILTR.                                               MEAN
               SUBM                                (CALCD.)                    SIO2
                ID     MG/L          MG/L          MG/L          MG/L          MG/L          M3/S          CFS
SAMPLES(FLAGS)              4(0)          4(0)                        2(0)          4(0)                        4(0)
           LOW              720.            2.                        710.          5.17                         .52
          HIGH              874.           14.                        870.          10.3                        1.35
       AVERAGE             776.5           7.5                       790.0          7.47                       .9500
      STD.DEV.              69.5           5.5                       113.1          2.12                       .4410
   PERCNT:10TH
          25TH             727.0           3.0                                      6.08                       .5700
   MEDIAN 50TH             756.0           7.0                       790.0          7.20                       .9650
          75TH             826.0          12.0                                      8.85                      1.3300
          90TH
SECONDARY CODE               71L           01L                                       02L

                       00205L        02074L        06537L        06524L        02001L        16101L        10701L        06608L
                       TOTAL         TURBIDITY     PHENOLIC      OIL AND       ODOUR         SULPHIDE      SURFACT.      CYANIDE
                       DISSOLVED                   MATERIAL      GREASE        THRESHOLD     DISSOLVED     N-ALKYL
                       SOLIDS                                                  NUMBER                      SULPHNTS.
               SUBM                                PHENOL                                    S             LAS           CN
                ID     MG/L          NTU           MG/L          MG/L          TON           MG/L          MG/L          MG/L
SAMPLES(FLAGS)              4(0)          4(0)          4(0)          4(0)          2(0)                        4(1)
           LOW              626.           2.0          .010           1.4            2.                        L.01
          HIGH             776.0          23.0          .019            9.           10.                        1.41
       AVERAGE             687.8          10.1          .014         4.500            6.                       .505*
      STD.DEV.              70.9           9.6          .004         3.494            6.                       .626*
   PERCNT:10TH
          25TH             630.5           2.8          .011         1.750                                     .095*
   MEDIAN 50TH             674.5           7.8          .013         3.800            6.                        .300
          75TH             745.0          17.5          .017         7.250                                      .915
          90TH
SECONDARY CODE                                                         21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE   7                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB0501    LAT. 53D 32M  2S  LONG. 113D 23M 32S   PR 3   UTM 12 341450E 5934100N  FOR MAY 05, 1981 TO AUG 16, 1983
THE STEEL COMPANY OF CANADA LTD EDM       FINAL EFFLUENT COMP
NW30/SW31 T52 R23 W4M

                      08304L       08202L        06107L        06154L        06001L        06051L        06006L        06905L
                      OXYGEN       OXYGEN        CARBON        CARBON        CARBON        CARBON        CARBON        CARBON
                       TOTAL      BIOCHEM.      DISSOLVED     DISSOLVED       TOTAL         TOTAL       TOTAL        PARTICULATE
                        COD      DEMAND-BOD      ORGANIC      INORGANIC      ORGANIC      INORGANIC                     TOTAL
               SUBM     02           02          C             C             C             C             C             C
                ID     MG/L         MG/L         MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          4(0)                      2(0)          2(0)          2(0)                                      2(0)
           LOW          42.                       19.           14.           13.4                                      2.24
          HIGH          157.                      21.0          28.0          19.4                                      2.89
       AVERAGE           88.8                     20.00         21.00         16.40                                     2.57
      STD.DEV.           48.7                      1.41          9.90          4.24                                      .46
   PERCNT:10TH
          25TH           57.5
   MEDIAN 50TH           78.0                     20.00         21.00         16.40                                     2.57
          75TH          120.0
          90TH
SECONDARY CODE        01L                                                   07L

                      24101L       24009L        24302L        80015L        80011L        27009L        27302L        47304L
                     CHROMIUM     CHROMIUM      CHROMIUM      MERCURY       MERCURY       COBALT        COBALT        SILVER
                    HEXAVALENT     TOTAL        EXTRBLE.       TOTAL         TOTAL         TOTAL        EXTRBLE.      EXTRBLE.

               SUBM     CR           CR            CR            HG            HG            CO            CO            AG
                ID     MG/L         MG/L          MG/L          MG/L          UG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          4(4)         3(0)                         2(2)          1(1)          3(2)                        1(1)
           LOW          L.001        .003                         L.0001        L.02          L.001                       L.02
          HIGH          L.01         .010                         L.0001        L.02          L.01                        L.02
       AVERAGE                       .008                                                      .005*
      STD.DEV.                       .004                                                      .005*
   PERCNT:10TH
          25TH          L.001
   MEDIAN 50TH          L.005        .01                          L.0001                       .003
          75TH          L.010
          90TH
SECONDARY CODE

                      29009L       29305L        28009L        28302L        48009L        48302L        82009L        82302L
                      COPPER       COPPER        NICKEL        NICKEL        CADMIUM       CADMIUM        LEAD          LEAD
                       TOTAL      EXTRBLE.       TOTAL        EXTRBLE.       TOTAL        EXTRBLE.       TOTAL        EXTRBLE.

               SUBM     CU           CU            NI            NI            CD            CD            PB            PB
                ID     MG/L         MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          3(1)                       3(1)                        3(3)                        1(0)          2(1)
           LOW          .016                       L.005                       L.001                        .006          .006
          HIGH          .021                        .020                       L.01                         .006         L.02
       AVERAGE          .019*                       .012*                                                                .013*
      STD.DEV.          .003*                       .008*                                                                .010*
   PERCNT:10TH
          25TH
   MEDIAN 50TH          L.02                        .012                       L.001                                     .013*
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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                                                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                         INDUSTRIAL MONITORING
STATION 20AL05EB0501    LAT. 53D 32M  2S  LONG. 113D 23M 32S   PR 3   UTM 12 341450E 5934100N  FOR MAY 05, 1981 TO AUG 16, 1983
THE STEEL COMPANY OF CANADA LTD EDM       FINAL EFFLUENT COMP
NW30/SW31 T52 R23 W4M

                        30009L       30305L       25003L       25304L       23009L       42304L       42009L       51003L
                         ZINC         ZINC       MANGANESE    MANGANESE    VANADIUM    MOLYBDENUM   MOLYBDENUM    ANTIMONY
                        TOTAL       EXTRBLE.      TOTAL        EXTRBLE.     TOTAL       EXTRBLE.      TOTAL        TOTAL

                SUBM     ZN           ZN           MN           MN           V            MO           MO           SB
                 ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          3(0)                      3(0)                      3(1)                      3(0)         1(0)
           LOW           .04                       .061                      .004                      .04         .023
          HIGH           .061                      .283                      .011                      .112        .023
       AVERAGE           .050                      .169                      .008*                     .086
      STD.DEV.           .011                      .111                      .004*                     .040
   PERCNT:10TH
          25TH
   MEDIAN 50TH           .048                      .163                      L.01                      .106
          75TH
          90TH
SECONDARY CODE

                        33005L       33104L       34005L       34102L       13111L       13306L       04102L       04304L
                        ARSENIC      ARSENIC     SELENIUM     SELENIUM     ALUMINUM     ALUMINUM     BERYLLIUM    BERYLLIUM
                        TOTAL       DISSOLVED    TOTAL        DISSOLVED    DISSOLVED    EXTRBLE.     DISSOLVED     EXTRBLE.

                SUBM     AS           AS           SE           SE           AL           AL           BE           BE
                 ID     MG/L         MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          1(0)                      1(0)                      1(0)         2(0)         1(1)         2(2)
           LOW           .011                      .002                     30.           .055        L.005        L.001
          HIGH           .011                      .002                     30.           .158        L.005        L.001
       AVERAGE                                                                            .107
      STD.DEV.                                                                            .073
   PERCNT:10TH
          25TH
   MEDIAN 50TH                                                                            .107                     L.001
          75TH
          90TH
SECONDARY CODE                                     07L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE   9                 NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                               INDUSTRIAL MONITORING
STATION 20AL05EB0800    LAT. 53D 32M 28S  LONG. 113D 24M 37S   PR 3   UTM 12 340300E 5934950N  FOR MAR 12, 1981 TO JUL 25, 1984
CANADIAN INDUSTRIES LTD EDMONTON            FINAL EFFLUENT GRAB
NW S36 T52 R24 W4M

                        02061F      10301L      10301F      10151L      10101L      02041L      97160S      97163S
                      TEMPERATURE     PH          PH      ALKALINITY  ALKALINITY   SPECIFIC   DISCHARGE   DISCHARGE
                      OF WATER                               PHENOL      TOTAL     CONDUCT.    INSTANT      DAILY
                                                          PHTHALEIN                                          MEAN
                  SUBM                                       CACO3       CACO3
                   ID   DEG.C       PH UNITS    PH UNITS     MG/L        MG/L       US/CM       M3/S         CFS
SAMPLES(FLAGS)           7(0)        10(0)                   9(1)        10(0)      10(0)                   10(0)
           LOW           14.0         7.0                     .0          60.4       252.                    .03
          HIGH           32.0         8.3                    L.1         127.        557.                    .29
       AVERAGE           25.0                                 .0*         90.7       374.                    .1860
      STD.DEV.            5.9                                 .0*         27.3        90.                    .0699
   PERCNT:10TH                        7.21                                61.9       262.                    .0950
          25TH           22.0         7.8                     .0          67.0       336.                    .16
   MEDIAN 50TH           26.0         7.90                    .0          86.0       353.                    .1785
          75TH           29.0         8.00                    .0         121.        413.                    .236
          90TH                        8.20                               126.0       513.                    .2680
SECONDARY CODE

                        06201L      06202L      06301L      20103L      20105L      10602L      10604L      97160S
                      BICARBONT.  BICARBONT.  CARBONATE    CALCIUM     CALCIUM    HARDNESS    HARDNESS   DISCHARGE
                       (CALCD.)    (CALCD.)    (CALCD.)   DISSOLVED   DISSOLVED     TOTAL       TOTAL      INSTANT
                                                                       (CALCD.)    (CALCD.)
                  SUBM  HCO3        HCO3        CO3          CA          CA         CACO3       CACO3
                   ID   MG/L        MG/L        MG/L         MG/L        MG/L       MG/L        MG/L         M3/S
SAMPLES(FLAGS)           9(1)        3(0)        9(1)        10(0)        1(0)       8(0)        3(0)
           LOW           74.         77.          0.          23.0        40.8       113.6        88.0
          HIGH          155.         89.         Q0.          60.         40.8       203.3       172.0
       AVERAGE          114.*        83.          0.*         40.8                   159.1       127.6
      STD.DEV.           33.*         6.          0.*         10.6                    25.8        42.2
   PERCNT:10TH                                                26.0
          25TH           83.                      0.          36.0                   146.7
   MEDIAN 50TH          121.         83.          0.          40.0                   160.6       122.8
          75TH          147.                      0.          48.                    170.8
          90TH                                                55.0
SECONDARY CODE                                        11L 10L

                        11103L      12102L      19103L      09107L      17203L      16306L      26009L      26304L
                        SODIUM     MAGNESIUM   POTASSIUM   FLUORIDE    CHLORIDE    SULPHATE     IRON        IRON
                       DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED    TOTAL      EXTRBLE.

                  SUBM  NA          MG          K           F           CL          SO4         FE          FE
                   ID   MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)          10(0)       10(0)       10(0)       10(0)       10(0)       10(0)        2(0)        7(0)
           LOW           6.          7.3          .9         .47         5.          40.          .06         .04
          HIGH          42.0        17.0        21.0        1.80        27.00       154.0        2.22         .47
       AVERAGE          12.4        11.3         3.28       1.023        9.32        75.6        1.140        .187
      STD.DEV.          11.5         2.9         6.23        .431        7.35        34.2        1.527        .150
   PERCNT:10TH           6.0         7.7          .90        .605        5.00        44.3
          25TH           6.0         9.          1.00        .80         5.          50.                      .11
   MEDIAN 50TH           7.5        11.5         1.45        .915        6.40        67.3        1.140        .130
          75TH          11.         13.          1.5        1.00         8.          90.                      .31
          90TH          32.0        15.3        11.45       1.790       22.50       127.0
SECONDARY CODE     11L         11L         11L         06L 05L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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INDUSTRIAL MONITORING

STATION 20AL05EB0800 LAT. 53D 32M 28S LONG. 113D 24M 37S PR 3 UTM 12 340300E 5934950N FOR MAR 12, 1981 TO JUL 25, 1984
CANADIAN INDUSTRIES LTD EDMONTON FINAL EFFLUENT GRAB
NW S36 T52 R24 W4M

SUBM ID	07105L NITROGEN DISSOLVED NO3 & NO2 N MG/L	07205L NITROGEN DISSOLVED NITRITE N MG/L	07562L NITROGEN DISSOLVED AMMONIA N MG/L	07021L NITROGEN TOTAL KJELDAHL N MG/L	07906L NITROGEN PARTICULATE TOTAL N MG/L	07905L NITROGEN PARTICULATE (CALCD.) N MG/L	15421L PHOSPHORUS TOTAL P MG/L	97160S DISCHARGE INSTANT M3/S
SAMPLES(FLAGS)	10(0)	10(8)	9(0)	10(0)	6(1)		10(0)	
LOW	.03	L.02	.084	.4	L.01		.010	
HIGH	15.5	.96	1.340	2.320	.23		.12	
AVERAGE	2.068	.150*	.602	.874	.090*		.041	
STD.DEV.	4.773	.287*	.429	.606	.079*		.038	
PERCNT:10TH	.065	L.035		.400			.011	
25TH	.15	L.05	.334	.425	.030		.015	
MEDIAN 50TH	.450	L.050	.520	.773	.075		.024	
75TH	.740	L.050	.80	.825	.12		.076	
90TH	9.000	.565		1.910			.100	
SECONDARY CODE	10L	06L	61L	15L			19L 06L	

SUBM ID	10474L RESIDUE TOTAL MG/L	10407L RESIDUE NONFILTRABLE MG/L	10511L RESIDUE VOLATILE NONFILTR. (CALCD.) MG/L	10453L RESIDUE FILTRABLE MG/L	14101L SILICA REACTIVE SIO2 MG/L	97160S DISCHARGE INSTANT M3/S	97163S DISCHARGE DAILY MEAN CFS
SAMPLES(FLAGS)	10(0)	10(0)	1(0)	8(0)	10(0)		10(0)
LOW	200.	1.6	20.0	200.	3.0		.03
HIGH	432.8	36.0	20.0	430.0	5.8		.29
AVERAGE	303.6	13.9		308.8	4.47		.1860
STD.DEV.	78.9	13.3		80.3	.86		.0699
PERCNT:10TH	211.0	2.2			3.20		.0950
25TH	243.4	3.4		245.0	3.8		.16
MEDIAN 50TH	297.0	8.5		310.0	4.70		.1785
75TH	339.	29.		365.0	5.0		.236
90TH	425.9	34.5			5.47		.2680
SECONDARY CODE	71L	01L		51L	02L		

SUBM ID	00205L TOTAL DISSOLVED SOLIDS MG/L	02074L TURBIDITY NTU	06537L PHENOLIC MATERIAL PHENOL MG/L	06524L OIL AND GREASE MG/L	02001L ODOUR THRESHOLD NUMBER TON	16101L SULPHIDE DISSOLVED S MG/L	10701L SURFACT. N-ALKYL SULPHNTS. LAS MG/L	06608L CYANIDE CN MG/L
SAMPLES(FLAGS)	9(0)	9(1)	10(3)	10(0)	1(0)		8(1)	1(1)
LOW	146.2	L.1	L.002	.3	1.		.03	L.002
HIGH	321.3	10.0	.093	6.8	1.		.97	L.002
AVERAGE	220.4	2.2*	.012*	1.530			.296*	
STD.DEV.	52.8	3.0*	.028*	2.155			.347*	
PERCNT:10TH			L.002	.350				
25TH	186.0	1.0	L.002	.4			.075*	
MEDIAN 50TH	221.	1.2	.003	.600			.130	
75TH	241.	2.0	.005	1.0			.480	
90TH			.051	5.400				
SECONDARY CODE				21L				

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0007 -  0009 PAGE  11                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 20AL05EB0800    LAT. 53D 32M 28S  LONG. 113D 24M 37S   PR 3   UTM 12 340300E 5934950N  FOR MAR 12, 1981 TO JUL 25, 1984
CANADIAN INDUSTRIES LTD EDMONTON          FINAL EFFLUENT GRAB
NW S36 T52 R24 W4M

                           08304L      08202L      06107L      06154L      06001L      06051L      06006L      06905L
                           OXYGEN      OXYGEN      CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                            TOTAL     BIOCHEM.    DISSOLVED   DISSOLVED     TOTAL       TOTAL     TOTAL      PARTICULATE
                             COD     DEMAND-BOD    ORGANIC    INORGANIC    ORGANIC    INORGANIC                TOTAL
                  SUBM     02             02         C           C           C           C          C           C
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L       MG/L        MG/L
SAMPLES(FLAGS)             10(0)        1(1)        6(1)        6(0)        3(0)                               6(0)
           LOW               8.5        L5.         L.4        14.90         4.0                                .39
          HIGH              58.6        L5.        18.00       34.         138.0                               8.50
       AVERAGE              19.4                    4.63*      27.40        48.67                              2.35
      STD.DEV.              15.3                    6.65*       6.51        77.36                              3.08
  PERCNT:10TH                9.3
          25TH              10.                     1.4        27.5                                             .57
   MEDIAN 50TH              13.6                    2.00       29.00         4.0                               1.24
          75TH              20.0                    4.         30.0                                            2.16
          90TH              44.8
SECONDARY CODE             01L                                          07L 05L

                           24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                          CHROMIUM    CHROMIUM    CHROMIUM    MERCURY     MERCURY      COBALT      COBALT      SILVER
                         HEXAVALENT    TOTAL      EXTRBLE.     TOTAL       TOTAL       TOTAL      EXTRBLE.    EXTRBLE.

                  SUBM     CR          CR          CR          HG          HG          CO          CO          AG
                   ID      MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             9(4)        9(0)        1(0)        9(6)        1(1)        9(6)        1(1)        2(2)
           LOW              .0          .004        .004       L.0001       L.02       L.001       L.001        L.02
          HIGH              .06         .560        .004        .0006       L.02       L.01        L.001        L.02
       AVERAGE              .013*       .097                    .0002*                  .004*
      STD.DEV.              .023*       .179                    .0002*                  .004*
   PERCNT:10TH
          25TH             L.001        .008                   L.0001                  L.001
   MEDIAN 50TH             L.001        .029                   L.0001                   .003                    L.020
          75TH              .006        .061                    .0001                   .004
          90TH
SECONDARY CODE

                           29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                           COPPER      COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM      LEAD        LEAD
                           TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.

                  SUBM     CU          CU          NI          NI          CD          CD          PB          PB
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             9(1)        1(0)        9(2)        1(1)        9(9)        1(1)        5(4)        5(5)
           LOW              .004        .011        .004       L.001       L.001       L.001       L.003       L.002
          HIGH              .033        .011       L.02        L.001       L.01        L.001        .005       L.02
       AVERAGE              .015*                   .009*                                           .003*
      STD.DEV.              .010*                   .006*                                           .001*
   PERCNT:10TH
          25TH              .009                    .005                   L.001                   L.003       L.003
   MEDIAN 50TH              .010                    .007                   L.001                   L.003       L.003
          75TH              .023                    .009                   L.001                   L.003       L.02
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE  12                            NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                          INDUSTRIAL MONITORING
STATION 20AL05EB0800    LAT. 53D 32M 28S  LONG. 113D 24M 37S   PR 3   UTM 12 340300E 5934950N  FOR MAR 12, 1981 TO JUL 25, 1984
CANADIAN INDUSTRIES LTD EDMONTON            FINAL EFFLUENT GRAB
NW S36 T52 R24 W4M

                          30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                           ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                          TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL     EXTRBLE.     TOTAL       TOTAL

                 SUBM      ZN          ZN          MN          MN          V           MO          MO          SB
                  ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            9(0)        1(0)        9(1)        1(0)        9(6)                    7(5)        1(0)
           LOW            .008        .014        .006        .03         L.001                   L.001       .002
          HIGH            .063        .014        .073        .03         L.01                    .04         .002
       AVERAGE            .036                    .025*                   .005*                   .007*
      STD.DEV.            .020                    .021*                   .004*                   .015*
   PERCNT:10TH
          25TH            .03                     .009                    L.002                   L.001
   MEDIAN 50TH            .033                    .020                    .004                    L.001
          75TH            .055                    .028                    .007                    .004
          90TH
SECONDARY CODE                                                            02L

                          33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                          ARSENIC     ARSENIC     SELENIUM    SELENIUM    ALUMINUM    ALUMINUM    BERYLLIUM   BERYLLIUM
                          TOTAL      DISSOLVED    TOTAL      DISSOLVED   DISSOLVED    EXTRBLE.   DISSOLVED    EXTRBLE.

                 SUBM      AS          AS          SE          SE          AL          AL          BE          BE
                  ID      MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            5(4)        1(0)        4(2)        1(1)        1(0)        7(0)        2(2)        7(7)
           LOW            L.0002      .0004       L.0002      L.0002      1600.       .185        L.005       L.001
          HIGH            L.001       .0004       L.001       L.0002      1600.       .536        L.005       L.001
       AVERAGE            .0004*                  .0005*                              .349
      STD.DEV.            .0003*                  .0003*                              .133
   PERCNT:10TH
          25TH            L.0002                  .0003*                              .21                     L.001
   MEDIAN 50TH            L.0002                  .0005                               .335        L.005       L.001
          75TH            .0004                   .0007*                              .502                    L.001
          90TH
SECONDARY CODE                                    07L                                 02L                     02L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  13                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                    INDUSTRIAL MONITORING
STATION 20AL05EB0801    LAT. 53D 32M 28S  LONG. 113D 24M 37S   PR 3   UTM 12 340300E 5934950N  FOR JUL 06, 1982 TO JUL 24, 1984
CANADIAN INDUSTRIES LTD EDMONTON          FINAL EFFLUENT COMP.
NW S36 T52 R24 W4M
                        02061F        10301L        10301F        10151L        10101L        02041L        97160S        97163S
                   TEMPERATURE            PH            PH    ALKALINITY    ALKALINITY      SPECIFIC     DISCHARGE     DISCHARGE
                      OF WATER                                    PHENOL         TOTAL      CONDUCT.       INSTANT         DAILY
                                                               PHTHALEIN                                                    MEAN
                SUBM                                               CACO3         CACO3
                  ID     DEG.C      PH UNITS      PH UNITS          MG/L          MG/L         US/CM          M3/S           CFS
SAMPLES(FLAGS)                          3(0)                        2(1)          3(0)          3(0)                        3(0)
           LOW                          7.09                          .0          62.6          328.                         .15
          HIGH                          8.30                         L.1          106.          373.                        .236
       AVERAGE                                                       .0*          81.5          348.                       .1910
      STD.DEV.                                                       .1*          22.2           23.                       .0431
   PERCNT:10TH
          25TH
   MEDIAN 50TH                           7.9                         .0*          76.0          344.                        .187
          75TH
          90TH
SECONDARY CODE
                        06201L        06202L        06301L        20103L        20105L        10602L        10604L        97160S
                    BICARBONT.    BICARBONT.     CARBONATE       CALCIUM       CALCIUM      HARDNESS      HARDNESS     DISCHARGE
                      (CALCD.)      (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED         TOTAL         TOTAL       INSTANT
                                                                              (CALCD.)      (CALCD.)
                SUBM      HCO3          HCO3           CO3            CA            CA         CACO3         CACO3
                  ID  MG/L              MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)            2(1)          2(0)          2(1)          3(0)          1(0)          3(0)          1(0)
           LOW            Q92.           76.            0.          28.0          27.8         123.4         123.0
          HIGH            129.           93.           Q0.           47.          27.8         154.4         123.0
       AVERAGE           111.*           85.           0.*          37.3                       140.5
      STD.DEV.            26.*           12.           0.*           9.5                        15.7
   PERCNT:10TH
          25TH
   MEDIAN 50TH            111.           85.            0.          36.9                       143.6
          75TH
          90TH
SECONDARY CODE                                               10L
                        11103L        12102L        19103L        09107L        17203L        16306L        26009L        26304L
                        SODIUM     MAGNESIUM     POTASSIUM      FLUORIDE      CHLORIDE      SULPHATE          IRON          IRON
                     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED         TOTAL      EXTRBLE.
                SUBM        NA            MG             K             F            CL           SO4            FE            FE
                  ID      MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)            3(0)          3(0)          3(0)          3(0)          3(0)          3(0)                        2(0)
           LOW              8.            9.           .90           .89            5.           70.                        .090
          HIGH            13.0          13.0          1.31         1.220         10.00          84.0                         .14
       AVERAGE             9.9          11.5          1.17         1.007          7.57          75.8                        .115
      STD.DEV.             2.7           2.2           .23          .185          2.50           7.3                        .035
   PERCNT:10TH
          25TH
   MEDIAN 50TH             8.6          12.5           1.3           .91          7.70          73.5                        .115
          75TH
          90TH
SECONDARY CODE                                               05L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  14                              NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                             INDUSTRIAL MONITORING
STATION 20AL05EB0801    LAT. 53D 32M 28S  LONG. 113D 24M 37S   PR 3   UTM 12 340300E 5934950N  FOR JUL 06, 1982 TO JUL 24, 1984
CANADIAN INDUSTRIES LTD EDMONTON          FINAL EFFLUENT COMP.
NW S36 T52 R24 W4M

                          07105L      07205L      07562L      07021L      07906L      07905L      15421L      97160S
                         NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN   PHOSPHORUS  DISCHARGE
                         DISSOLVED   DISSOLVED   DISSOLVED    TOTAL    PARTICULATE PARTICULATE   TOTAL       INSTANT
                         NO3 & NO2    NITRITE    AMMONIA     KJELDAHL     TOTAL      (CALCD.)
                  SUBM       N           N           N           N           N           N           P
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             3(0)        3(2)        2(0)        3(0)        1(0)                    3(0)          M3/S
           LOW             .100        L.05         .697        .800        .050                    .008
          HIGH             .620         .085       1.490       2.000        .050                    .063
       AVERAGE             .390         .062*      1.093       1.207                                .035
      STD.DEV.             .265         .020*       .561        .687                                .028
  PERCNT:10TH
          25TH
   MEDIAN 50TH             .45         L.050       1.093        .82                                 .035
          75TH
          90TH
SECONDARY CODE            10L         06L                     15L                     06L

                          10474L      10407L      10511L      10453L      14101L      97160S      97163S
                         RESIDUE     RESIDUE     RESIDUE     RESIDUE      SILICA    DISCHARGE   DISCHARGE
                          TOTAL    NONFILTRABLE  VOLATILE   FILTRABLE    REACTIVE    INSTANT      DAILY
                                                NONFILTR.                                          MEAN
                  SUBM                          (CALCD.)                  SIO2
                   ID     MG/L        MG/L        MG/L        MG/L        MG/L                     CFS
SAMPLES(FLAGS)            3(0)        3(1)                    3(0)        3(0)        M3/S         3(0)
           LOW            202.0       L2.0                    200.         3.20                    .15
          HIGH            287.        15.0                    300.0        5.40                    .236
       AVERAGE            236.3        8.0*                   260.0        4.43                    .1910
      STD.DEV.             44.8        6.6*                    52.9        1.12                    .0431
  PERCNT:10TH
          25TH
   MEDIAN 50TH            220.         7.                     280.         4.7                     .187
          75TH
          90TH
SECONDARY CODE           71L         01L                     51L         02L

                          00205L      02074L      06537L      06524L      02001L      16101L      10701L      06608L
                          TOTAL     TURBIDITY    PHENOLIC    OIL AND      ODOUR     SULPHIDE    SURFACT.     CYANIDE
                        DISSOLVED                MATERIAL    GREASE     THRESHOLD   DISSOLVED    N-ALKYL
                         SOLIDS                                          NUMBER                 SULPHNTS.
                  SUBM                           PHENOL                                 S          LAS         CN
                   ID     MG/L        NTU         MG/L        MG/L        TON         MG/L        MG/L        MG/L
SAMPLES(FLAGS)            2(0)        3(0)        2(1)        2(0)                                 2(0)
           LOW            186.8        1.0        L.002       1.100                                .04
          HIGH            205.        15.0         .003       9.3                                  .37
       AVERAGE            195.9        6.2         .002*      5.200                                .205
      STD.DEV.             12.9        7.7         .001*      5.798                                .233
  PERCNT:10TH
          25TH
   MEDIAN 50TH            195.9        2.5         .002*      5.200                                .205
          75TH
          90TH
SECONDARY CODE                                                21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  15                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 20AL05EB0801    LAT. 53D 32M 28S  LONG. 113D 24M 37S   PR 3   UTM 12 340300E 5934950N  FOR JUL 06, 1982 TO JUL 24, 1984
CANADIAN INDUSTRIES LTD EDMONTON          FINAL EFFLUENT COMP.
NW S36 T52 R24 W4M
                    08304L        08202L        06107L        06154L        06001L        06051L        06006L        06905L
                    OXYGEN        OXYGEN        CARBON        CARBON        CARBON        CARBON        CARBON        CARBON
                    TOTAL         BIOCHEM.      DISSOLVED     DISSOLVED     TOTAL         TOTAL         TOTAL         PARTICULATE
                    COD           DEMAND-BOD    ORGANIC       INORGANIC     ORGANIC       INORGANIC                   TOTAL
               SUBM 02            02            C             C             C             C             C             C
                 ID MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
     SAMPLES(FLAGS) 3(0)                        1(0)          1(0)          1(0)                                      1(0)
                LOW 8.0                         11.20         15.10         3.7                                       1.04
               HIGH 60.                         11.20         15.10         3.7                                       1.04
            AVERAGE 36.2
           STD.DEV. 26.3
        PERCNT:10TH
               25TH
        MEDIAN 50TH 40.5
               75TH
               90TH
     SECONDARY CODE 01L                                                     05L
                    24101L        24009L        24302L        80015L        80011L        27009L        27302L        47304L
                    CHROMIUM      CHROMIUM      CHROMIUM      MERCURY       MERCURY       COBALT        COBALT        SILVER
                    HEXAVALENT    TOTAL         EXTRBLE.      TOTAL         TOTAL         TOTAL         EXTRBLE.      EXTRBLE.

               SUBM CR            CR            CR            HG            HG            CO            CO            AG
                 ID MG/L          MG/L          MG/L          MG/L          UG/L          MG/L          MG/L          MG/L
     SAMPLES(FLAGS) 2(0)          1(0)          1(0)          1(1)          1(0)          1(0)          1(1)
                LOW .012          .175          .02           L.0001        .000          .004          L.001
               HIGH .020          .175          .02           L.0001        .000          .004          L.001
            AVERAGE .016
           STD.DEV. .006
        PERCNT:10TH
               25TH
        MEDIAN 50TH .016
               75TH
               90TH
     SECONDARY CODE
                    29009L        29305L        28009L        28302L        48009L        48302L        82009L        82302L
                    COPPER        COPPER        NICKEL        NICKEL        CADMIUM       CADMIUM       LEAD          LEAD
                    TOTAL         EXTRBLE.      TOTAL         EXTRBLE.      TOTAL         EXTRBLE.      TOTAL         EXTRBLE.

               SUBM CU            CU            NI            NI            CD            CD            PB            PB
                 ID MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
     SAMPLES(FLAGS) 1(0)          1(0)          1(0)          1(0)          1(0)          1(1)                        2(1)
                LOW .014          .046          .007          .002          .002          L.001                       L.002
               HIGH .014          .046          .007          .002          .002          L.001                       .011
            AVERAGE                                                                                                   .006*
           STD.DEV.                                                                                                   .006*
        PERCNT:10TH
               25TH
        MEDIAN 50TH                                                                                                   .006*
               75TH
               90TH
     SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE  16                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                         INDUSTRIAL MONITORING
STATION 20AL05EB0801    LAT. 53D 32M 28S  LONG. 113D 24M 37S   PR 3   UTM 12 340300E 5934950N  FOR JUL 06, 1983 TO JUL 24, 1984
CANADIAN INDUSTRIES LTD EDMONTON          FINAL EFFLUENT COMP.
NW S36 T52 R24 W4M

                            30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                             ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM  ANTIMONY
                             TOTAL     EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                      SUBM    ZN          ZN          MN          MN          V           MO          MO          SB
                       ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)                1(0)        1(0)        1(1)        1(0)        2(1)                    1(1)
           LOW                .086        .500        L.008       .05         L.001                   L.001
          HIGH                .086        .500        L.008       .05         .007                    L.001
       AVERAGE                                                                .004*
      STD.DEV.                                                                .004*
   PERCNT:10TH
          25TH
   MEDIAN 50TH                                                                .004*
          75TH
          90TH
SECONDARY CODE                                                    02L

                            33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                            ARSENIC     ARSENIC     SELENIUM    SELENIUM    ALUMINUM    ALUMINUM    BERYLLIUM   BERYLLIUM
                            TOTAL      DISSOLVED    TOTAL      DISSOLVED   DISSOLVED    EXTRBLE.   DISSOLVED    EXTRBLE.

                      SUBM    AS          AS          SE          SE          AL          AL          BE          BE
                       ID    MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)                1(1)        1(0)                    1(1)                    2(0)                    2(2)
           LOW               L.0002      .0004                   L.0002                   .34                     L.001
          HIGH               L.0002      .0004                   L.0002                   .477                    L.001
       AVERAGE                                                                            .409
      STD.DEV.                                                                            .097
   PERCNT:10TH
          25TH
   MEDIAN 50TH                                                                            .409                    L.001
          75TH
          90TH
SECONDARY CODE                                                                         02L                     02L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  17                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB1400    LAT. 53D 33M  6S  LONG. 113D 23M 38S   PR 3   UTM 12 341400E 5936100N  FOR APR 29, 1980 TO AUG 16, 1984
IMPERIAL OIL LTD STRATHCONA               FINAL EFFLUENT GRAB
S36 T52 R24 W4M

                      02061F        10301L        10301F        10151L        10101L        02041L        97160S        97163S
                    TEMPERATURE       PH            PH        ALKALINITY    ALKALINITY     SPECIFIC     DISCHARGE     DISCHARGE
                    OF WATER                                   PHENOL         TOTAL       CONDUCT.      INSTANT        DAILY
                                                              PHTHALEIN                                                 MEAN
               SUBM                                             CACO3         CACO3
                ID   DEG.C        PH UNITS      PH UNITS        MG/L          MG/L          US/CM         M3/S          CFS
SAMPLES(FLAGS)          15(0)         17(0)          4(0)         16(1)         17(0)         17(0)                       17(0)
           LOW           13.5           6.5           7.0            .0           55.         1160.                         .46
          HIGH           32.0           8.4           8.6           4.2          140.         3210.                        3.44
       AVERAGE           22.0                                       .3*        109.0         1822.                      2.0059
      STD.DEV.            5.3                                      1.0*         24.0          618.                       .8253
   PERCNT:10TH           16.0           6.7                          .0           74.         1233.                         .49
          25TH            19.           7.0          7.25            .0          101.         1350.                        1.56
   MEDIAN 50TH           21.0           7.2          7.55            .0          113.         1702.                        2.18
          75TH           26.0           7.4          8.10            .0          128.         2120.                        2.44
          90TH           29.0           7.7                          L.5         134.0         2920.                        2.96
SECONDARY CODE

                      06201L        06202L        06301L        20103L        20105L        10602L        10604L        97160S
                    BICARBONT.    BICARBONT.    CARBONATE      CALCIUM       CALCIUM      HARDNESS      HARDNESS     DISCHARGE
                     (CALCD.)      (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED       TOTAL         TOTAL       INSTANT
                                                                             (CALCD.)      (CALCD.)
               SUBM  HCO3           HCO3          CO3            CA            CA          CACO3         CACO3
                ID   MG/L           MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)          16(1)          5(0)         16(1)         16(0)          5(0)         12(0)          6(0)
           LOW            67.          127.            0.           77.          50.8         269.7          263.
          HIGH           171.          450.            5.          246.         151.7         565.0          754.
       AVERAGE           131.*         204.            0.*        127.4         118.6         371.3         496.7
      STD.DEV.            30.*         138.            1.*         48.5          40.5          91.2         177.3
   PERCNT:10TH            84.                          0.           80.                       270.5
          25TH           115.          130.            0.          92.5         118.6         300.0          383.
   MEDIAN 50TH           134.          150.            0.         117.0         124.4         349.9         470.0
          75TH           154.          163.            0.         138.0         147.7         421.2         640.0
          90TH           163.                          Q1.        208.0                       497.2
SECONDARY CODE                                         11L 10L

                      11103L        12102L        19103L        09107L        17203L        16306L        26009L        26304L
                      SODIUM      MAGNESIUM     POTASSIUM      FLUORIDE      CHLORIDE      SULPHATE        IRON          IRON
                    DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED       TOTAL       EXTRBLE.

               SUBM    NA            MG             K             F             CL           SO4            FE            FE
                ID     MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          17(0)         17(0)         17(0)         17(0)         17(0)         17(0)          2(0)         15(0)
           LOW            96.           17.           2.2           .18         103.0          190.            .3           .09
          HIGH           407.           35.          13.0         33.26          781.         359.0           .67          3.97
       AVERAGE          196.3          24.8          7.36         5.061        343.94         258.8          .485          .703
      STD.DEV.          100.0           5.6          3.28         9.619        198.34          50.6          .262         1.016
   PERCNT:10TH           104.           19.           2.8           .20          135.          190.                         .23
          25TH           118.           21.           4.7          .680          185.          220.                         .30
   MEDIAN 50TH           164.           23.           7.1           .95          300.         241.0          .485           .32
          75TH           239.           30.           9.0          3.35          450.         295.0                         .56
          90TH           375.           33.           13.         26.75          710.          333.                        2.07
SECONDARY CODE       11L           11L           11L           06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  18                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                          INDUSTRIAL MONITORING
STATION 20AL05EB1400    LAT. 53D 33M  6S  LONG. 113D 23M 38S   PR 3   UTM 12 341400E 5936100N  FOR APR 29, 1980 TO AUG 16, 1984
IMPERIAL OIL LTD STRATHCONA                   FINAL EFFLUENT GRAB
S36 T52 R24 W4M

                         07105L        07205L        07562L        07021L        07906L        07905L        15421L        97160S
                         NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      PHOSPHORUS    DISCHARGE
                         DISSOLVED     DISSOLVED     DISSOLVED     TOTAL         PARTICULATE   PARTICULATE   TOTAL          INSTANT
                         NO3 & NO2     NITRITE       AMMONIA       KJELDAHL      TOTAL         (CALCD.)
                  SUBM   N             N             N             N             N             N             P
                  ID     MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)           17(11)        17(12)        17(0)         16(0)         12(0)                       16(0)
           LOW           L.02          L.02          .096          2.0           .23                         .24
          HIGH           .27           .15           5.300         13.200        1.6                         1.700
       AVERAGE           .083*         .061*         1.642         4.705         .889                        .764
      STD.DEV.           .069*         .033*         1.350         2.613         .417                        .448
   PERCNT:10TH           L.02          L.02          .350          2.5           .36                         .330
          25TH           L.05          L.05          .750          3.119         .585                        .455
   MEDIAN 50TH           L.05          L.05          1.440         4.[illegible]50         .895                        .640
          75TH           .10           .053          2.020         5.145         1.205                       .895
          90TH           .21           .10           3.650         7.000         1.30                        1.6
SECONDARY CODE                                     61L           15L                                       19L 06L

                         10474L        10407L        10511L        10453L        14101L        97160S        97163S
                         RESIDUE       RESIDUE       RESIDUE       RESIDUE       SILICA        DISCHARGE     DISCHARGE
                         TOTAL         NONFILTRABLE  VOLATILE      FILTRABLE     REACTIVE       INSTANT       DAILY
                                                     NONFILTR.                                                 MEAN
                  SUBM                               (CALCD.)                    SIO2
                  ID     MG/L          MG/L          MG/L          MG/L          MG/L          M3/S          CFS
SAMPLES(FLAGS)           15(0)         17(0)         1(0)          13(0)         17(0)                       17(0)
           LOW           771.          10.0          34.0          540.          5.0                         .46
          HIGH           2178.0        231.          34.0          1680.         19.4                        3.44
       AVERAGE           1226.8        39.8                        1038.2        8.94                        2.0059
      STD.DEV.           367.7         54.3                        280.9         3.54                        .8253
   PERCNT:10TH           868.          10.                         726.          6.20                        .49
          25TH           970.          18.                         860.          6.8                         1.56
   MEDIAN 50TH           1114.         24.                         1060.         8.0                         2.18
          75TH           1308.         27.                         1180.         8.5                         2.44
          90TH           1699.         109.                        1290.         15.6                        2.96
SECONDARY CODE           71L           01L                         51L           02L

                         00205L        02074L        06537L        06524L        02001L        16101L        10701L        06608L
                         TOTAL         TURBIDITY     PHENOLIC      OIL AND       ODOUR         SULPHIDE      SURFACT.       CYANIDE
                         DISSOLVED                   MATERIAL      GREASE        THRESHOLD     DISSOLVED     N-ALKYL
                         SOLIDS                                                  NUMBER                      SULPHNTS.
                  SUBM                               PHENOL                                    S             LAS           CN
                  ID     MG/L          NTU           MG/L          MG/L          TON           MG/L          MG/L          MG/L
SAMPLES(FLAGS)           16(0)         14(0)         17(0)         16(0)         14(0)         13(3)         13(0)         7(2)
           LOW           664.          3.0           .020          1.            1.            L.02          .15           L.002
          HIGH           2035.         78.0          .780          25.6          100.          .50           5.40          .160
       AVERAGE           1053.5        23.6          .133          6.969         19.           .155*         1.816         .0376*
      STD.DEV.           397.2         23.9          .211          6.997         35.           .135*         1.720         .0550*
   PERCNT:10TH           700.          4.5           .022          1.0           1.            L.02          .28
          25TH           804.0         5.5           .027          2.150         1.            .060          .45           .008
   MEDIAN 50TH           868.5         13.3          .044          5.000         7.            .13           1.46          L.02
          75TH           1261.2        45.0          .121          7.700         10.           .20           2.60          .035
          90TH           1632.0        61.           .530          20.5          100.          .32           4.25
SECONDARY CODE                         73L                         21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  19                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                      INDUSTRIAL MONITORING
STATION 20AL05EB1400    LAT. 53D 33M  6S  LONG. 113D 23M 38S   PR 3   UTM 12 341400E 5936100N  FOR APR 29, 1980 TO AUG 16, 1984
IMPERIAL OIL LTD STRATHCONA                 FINAL EFFLUENT GRAB
S36 T52 R24 W4M

                         08304L       08202L        06107L       06154L       06001L       06051L       06006L      06905L
                         OXYGEN       OXYGEN        CARBON       CARBON       CARBON       CARBON       CARBON      CARBON
                          TOTAL       BIOCHEM.      DISSOLVED    DISSOLVED    TOTAL        TOTAL        TOTAL       PARTICULATE
                           COD        DEMAND-BOD    ORGANIC      INORGANIC    ORGANIC      INORGANIC                TOTAL
                 SUBM      02            02           C            C            C            C            C           C
                  ID     MG/L          MG/L         MG/L         MG/L         MG/L         MG/L         MG/L        MG/L
SAMPLES(FLAGS)           17(0)         3(0)         13(0)        12(0)         4(0)         2(0)         1(0)       12(0)
           LOW            58.5          5.3           7.7        11.          13.5         12.          31.           2.36
          HIGH           235.0         44.7         95.          35.8         30.3         25.0         31.          34.85
       AVERAGE           115.2         19.93         19.24       27.04        21.45        18.50                     10.73
      STD.DEV.            55.0         21.57         23.13        6.57         7.07         9.19                     10.40
  PERCNT:10TH             64.0                       8.          20.                                                  4.29
          25TH            69.9                       9.          24.50        16.25                                   5.03
   MEDIAN 50TH            86.5          9.8         13.0         28.50        21.00        18.50                      6.15
          75TH           153.0                      16.          31.00        26.65                                  11.15
          90TH           198.                       21.0         32.                                                 29.31
SECONDARY CODE           01L                        01L                      05L 07L      52L

                         24101L       24009L        24302L       80015L       80011L       27009L       27302L      47304L
                         CHROMIUM     CHROMIUM      CHROMIUM     MERCURY      MERCURY      COBALT       COBALT      SILVER
                         HEXAVALENT   TOTAL         EXTRBLE.     TOTAL        TOTAL        TOTAL        EXTRBLE.    EXTRBLE.

                 SUBM    CR           CR            CR           HG           HG           CO           CO          AG
                  ID     MG/L         MG/L          MG/L         MG/L         UG/L         MG/L         MG/L        MG/L
SAMPLES(FLAGS)           15(11)       16(0)                      15(13)        2(2)        16(7)         1(0)        2(2)
           LOW           L.001         .120                      L.0001       L.02         L.001         .003       L.02
          HIGH            .087         .963                       .0062       L.02         1.79          .003       L.02
       AVERAGE            .010*        .304                       .0005*                    .115*
      STD.DEV.            .022*        .224                       .0016*                    .447*
  PERCNT:10TH            L.001         .133                      L.0001                    L.001
          25TH           L.001         .191                      L.0001                    L.001
   MEDIAN 50TH           L.001         .249                      L.0001       L.020         .003                    L.020
          75TH           L.01          .291                      L.0001                     .006
          90TH            .023         .735                       .0002                    L.01
SECONDARY CODE

                         29009L       29305L        28009L       28302L       48009L       48302L       82009L      82302L
                         COPPER       COPPER        NICKEL       NICKEL       CADMIUM      CADMIUM      LEAD        LEAD
                          TOTAL       EXTRBLE.      TOTAL        EXTRBLE.     TOTAL        EXTRBLE.     TOTAL       EXTRBLE.

                 SUBM    CU           CU            NI           NI           CD           CD           PB          PB
                  ID     MG/L         MG/L          MG/L         MG/L         MG/L         MG/L         MG/L        MG/L
SAMPLES(FLAGS)           16(1)        1(0)          16(2)        1(0)         15(10)       1(1)          7(1)       10(7)
           LOW            .003         .011          .008         .002        L.001        L.001        L.003       L.002
          HIGH            .080         .011          .052         .002        L.01         L.001         .014       L.02
       AVERAGE            .018*                      .020*                     .003*                     .007*       .007*
      STD.DEV.            .019*                      .013*                     .003*                     .004*       .007*
  PERCNT:10TH            L.005                       .009                     L.001                                 L.002
          25TH            .006                       .011                     L.001                      .005       L.003
   MEDIAN 50TH            .011                       .017                     L.001                      .005        .004*
          75TH            .027                      L.020                      .003                      .010        .008
          90TH            .032                       .044                     L.01                                  L.020
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE  20                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                      INDUSTRIAL MONITORING
STATION 20AL05EB1400    LAT. 53D 33M  6S  LONG. 113D 23M 38S   PR 3   UTM 12 341400E 5936100N  FOR APR 29, 1980 TO AUG 16, 1984
IMPERIAL OIL LTD STRATHCONA                FINAL EFFLUENT GRAB
S36 T52 R24 W4M

                             30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                              ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM  ANTIMONY
                             TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      TOTAL

                     SUBM     ZN          ZN          MN          MN          V           MO          MO          SB
                      ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)               16(0)        1(0)       16(0)        1(0)       13(2)                   12(4)        2(2)
           LOW                .070        .250        .025        .026        .001                   L.001       L.001
          HIGH               1.470        .250        .234        .026        .08                    1.21        L.001
       AVERAGE                .255                    .095                    .013*                   .106*
      STD.DEV.                .379                    .062                    .021*                   .348*
   PERCNT:10TH                .073                    .041                   L.002                   L.001
          25TH                .104                    .063                    .005                    .002*
    MEDIAN 50TH               .121                    .073                    .008                    .006       L.0010
          75TH                .165                    .102                    .010                    .009
          90TH                .901                    .215                    .015                   L.02
SECONDARY CODE                                                               02L

                             33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                             ARSENIC     ARSENIC     SELENIUM    SELENIUM    ALUMINUM    ALUMINUM    BERYLLIUM   BERYLLIUM
                             TOTAL      DISSOLVED    TOTAL      DISSOLVED   DISSOLVED    EXTRBLE.   DISSOLVED    EXTRBLE.

                     SUBM     AS          AS          SE          SE          AL          AL          BE          BE
                      ID     MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)               8(0)         1(0)        8(5)        1(1)        2(0)       11(0)        2(2)       11(10)
           LOW               .0058       .0058       L.0002      L.0002      170.         .039       L.005       L.001
          HIGH               .0130       .0058        .001       L.0002      230.        5.040       L.005        .003
       AVERAGE               .0091                    .0005*                 200.00        .922                   .001*
      STD.DEV.               .0021                    .0004*                  42.43       1.674                   .001*
   PERCNT:10TH                                                                            .060                   L.001
          25TH               .0081                   L.0002                               .076                   L.001
    MEDIAN 50TH              .0090                    .0002*                 200.00        .190       L.005       L.001
          75TH               .0099                    .0009*                               .44                    L.001
          90TH                                                                            3.390                   L.001
SECONDARY CODE                                       07L                                  02L                     02L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  21                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB1401    LAT. 53D 33M  6S  LONG. 113D 23M 38S   PR 3   UTM 12 341400E 5936100N  FOR MAY 05, 1981 TO AUG 16, 1984
IMPERIAL OIL LTD STRATHCONA               FINAL EFFLUENT COMP.
S36 T52 R24 W4M

                           02061F      10301L      10301F      10151L      10101L      02041L      97160S      97163S
                        TEMPERATURE      PH          PH      ALKALINITY  ALKALINITY   SPECIFIC   DISCHARGE   DISCHARGE
                          OF WATER                              PHENOL      TOTAL     CONDUCT.    INSTANT      DAILY
                                                             PHTHALEIN                                            MEAN
                  SUBM                                          CACO3       CACO3
                   ID      DEG.C      PH UNITS    PH UNITS      MG/L        MG/L       US/CM        M3/S        CFS
SAMPLES(FLAGS)                                5(0)        1(0)        4(0)        5(0)        5(0)                    5(0)
           LOW                                 6.7         8.4          .0         68.       1526.                    1.33
          HIGH                                 7.4         8.4          .0        144.       2760.                    2.39
       AVERAGE                                                          .0       111.9       2147.                  1.9900
      STD.DEV.                                                          .0        29.1        511.                   .5134
   PERCNT:10TH
          25TH                                 7.1                      .0        103.       1848.                    1.54
   MEDIAN 50TH                                 7.2                      .0        114.       2030.                     2.3
          75TH                                7.30                      .0       130.5       2570.                    2.39
          90TH
SECONDARY CODE

                           06201L      06202L      06301L      20103L      20105L      10602L      10604L      97160S
                         BICARBONT.  BICARBONT.  CARBONATE     CALCIUM     CALCIUM    HARDNESS    HARDNESS   DISCHARGE
                          (CALCD.)    (CALCD.)    (CALCD.)   DISSOLVED   DISSOLVED     TOTAL       TOTAL      INSTANT
                                                                          (CALCD.)    (CALCD.)
                  SUBM      HCO3        HCO3        CO3          CA          CA         CACO3       CACO3
                   ID       MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)                  4(0)        2(0)        4(0)        5(0)        2(0)        3(0)        3(0)
           LOW                   83.        138.          0.        102.       119.3       328.8        422.
          HIGH                  176.        159.          0.        232.       141.7       478.1        755.
       AVERAGE                  131.        149.          0.       140.0       130.5       390.7       551.7
      STD.DEV.                   38.         15.          0.        53.8        15.8        77.9       178.3
   PERCNT:10TH
          25TH                  104.                      0.        105.
   MEDIAN 50TH                  132.        149.          0.        119.       130.5       365.1       478.0
          75TH                  157.                      0.       142.0
          90TH
SECONDARY CODE                                                11L 10L

                           11103L      12102L      19103L      09107L      17203L      16306L      26009L      26304L
                            SODIUM   MAGNESIUM   POTASSIUM    FLUORIDE    CHLORIDE    SULPHATE      IRON        IRON
                         DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED     TOTAL      EXTRBLE.

                  SUBM       NA          MG          K           F           CL         SO4          FE          FE
                   ID       MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)                  5(0)        5(0)        5(0)        5(0)        5(0)        5(0)        1(0)        4(0)
           LOW                  148.         18.         4.5         .20        260.        255.         .21         .13
          HIGH                  374.         43.         13.       47.50        724.        349.         .21        3.60
       AVERAGE                 260.2        29.2        8.20      11.938      431.60       293.2                   1.138
      STD.DEV.                 105.8         9.1        3.23      20.072      183.18        37.4                   1.662
   PERCNT:10TH
          25TH                  182.         25.         6.1        1.37        294.       267.0                    .135
   MEDIAN 50TH                 227.0         30.        8.40        3.12      430.00        285.                    .410
          75TH                  370.        30.0         9.0       7.500        450.        310.                   2.140
          90TH
SECONDARY CODE                   11L         11L         11L         06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  22                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB1401    LAT. 53D 33M  6S  LONG. 113D 23M 38S   PR 3   UTM 12 341400E 5936100N  FOR MAY 05, 1981 TO AUG 16, 1984
IMPERIAL OIL LTD STRATHCONA               FINAL EFFLUENT COMP.
S36 T52 R24 W4M
                       07105L        07205L        07562L        07021L        07906L        07905L        15421L        97160S
                      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN     PHOSPHORUS     DISCHARGE
                      DISSOLVED     DISSOLVED     DISSOLVED      TOTAL       PARTICULATE   PARTICULATE     TOTAL         INSTANT
                      NO3 & NO2      NITRITE      AMMONIA       KJELDAHL       TOTAL        (CALCD.)
               SUBM       N             N             N             N             N             N             P
                ID      MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)          5(3)          5(5)          5(0)          5(0)          4(0)                        5(0)
           LOW          L.02          L.02           .25           2.4           .56                         .480
          HIGH           .10          L.050         2.900        13.350         2.08                         2.0
       AVERAGE          .056*                       1.309         8.090         1.133                        1.034
      STD.DEV.          .029*                        .977         4.864          .718                         .663
  PERCNT:10TH
          25TH          L.05          L.05           .953         4.200          .575                         .600
   MEDIAN 50TH          L.050         L.05          1.120         8.000          .945                         .640
          75TH           .06          L.05          1.320        12.500         1.690                        1.450
          90TH
SECONDARY CODE                                      61L           15L                                       19L

                       10474L        10407L        10511L        10453L        14101L        97160S        97163S
                      RESIDUE       RESIDUE       RESIDUE       RESIDUE       SILICA       DISCHARGE     DISCHARGE
                       TOTAL      NONFILTRABLE    VOLATILE     FILTRABLE     REACTIVE       INSTANT        DAILY
                                                  NONFILTR.                                                 MEAN
               SUBM                               (CALCD.)                    SIO2
                ID     MG/L          MG/L          MG/L          MG/L          MG/L          M3/S           CFS
SAMPLES(FLAGS)          5(0)          5(0)                        4(0)          5(0)                        5(0)
           LOW          1187.          19.4                       1150.          6.90                       1.33
          HIGH          2310.0         68.                        1670.         22.8                        2.39
       AVERAGE          1597.9         33.9                       1382.5        11.28                       1.9900
      STD.DEV.           461.6         20.3                        257.9         6.56                        .5134
  PERCNT:10TH
          25TH          1205.          20.0                       1165.0         8.0                        1.54
   MEDIAN 50TH          1549.3         25.                        1355.0         8.4                        2.3
          75TH          1738.          37.                        1600.0        10.3                        2.39
          90TH
SECONDARY CODE         71L           01L                                       02L

                       00205L        02074L        06537L        06524L        02001L        16101L        10701L        06608L
                       TOTAL        TURBIDITY      PHENOLIC     OIL AND        ODOUR       SULPHIDE      SURFACT.        CYANIDE
                      DISSOLVED                    MATERIAL    GREASE        THRESHOLD     DISSOLVED     N-ALKYL
                       SOLIDS                                                  NUMBER                    SULPHNTS.
               SUBM                                 PHENOL                                      S           LAS           CN
                ID     MG/L          NTU           MG/L          MG/L          TON           MG/L          MG/L          MG/L
SAMPLES(FLAGS)          5(0)          5(0)          5(0)          5(0)          4(0)                        4(0)          1(0)
           LOW          866.           5.0           .013          1.1           1.                          .11          .022
          HIGH          2225.         69.0           .110         53.8          100.                        3.75          .022
       AVERAGE          1310.6        29.6           .047         14.340         51.                        1.610
      STD.DEV.           535.1        29.8           .038         22.412         57.                        1.649
  PERCNT:10TH
          25TH          1004.          6.0           .019          1.5           2.                          .325
   MEDIAN 50TH          1182.8        14.0           .045          4.300         51.                        1.290
          75TH          1275.         54.0           .049         11.0          100.                        2.895
          90TH
SECONDARY CODE                                                   21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  23                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                    INDUSTRIAL MONITORING
STATION 20AL05EB1401    LAT. 53D 33M  6S  LONG. 113D 23M 38S   PR 3   UTM 12 341400E 5936100N  FOR MAY 05, 1981 TO AUG 16, 1984
IMPERIAL OIL LTD STRATHCONA               FINAL EFFLUENT COMP.
S36 T52 R24 W4M
                       08304L        08202L        06107L        06154L        06001L        06051L        06006L        06905L
                       OXYGEN        OXYGEN        CARBON        CARBON        CARBON        CARBON        CARBON        CARBON
                        TOTAL       BIOCHEM.     DISSOLVED     DISSOLVED       TOTAL         TOTAL       TOTAL       PARTICULATE
                         COD       DEMAND-BOD     ORGANIC      INORGANIC      ORGANIC      INORGANIC                    TOTAL
               SUBM      02            02           C             C             C             C             C             C
                 ID     MG/L          MG/L         MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)            5(0)          1(0)          4(0)          4(0)          1(0)                                    4(0)
           LOW            72.6           9.0          9.50           16.          26.7                                    5.39
          HIGH           295.0           9.0           71.         31.10          26.7                                   53.15
       AVERAGE           165.3                       28.13         23.77                                                 19.92
      STD.DEV.            99.1                       28.93          7.88                                                 22.39
   PERCNT:10TH
          25TH            81.0                       10.75         17.00                                                  6.70
   MEDIAN 50TH           136.0                       16.00         24.00                                                 10.56
          75TH           242.0                       45.50         30.55                                                 33.14
          90TH
SECONDARY CODE     01L                                                     07L
                       24101L        24009L        24302L        80015L        80011L        27009L        27302L        47304L
                      CHROMIUM      CHROMIUM      CHROMIUM      MERCURY       MERCURY        COBALT        COBALT        SILVER
                     HEXAVALENT      TOTAL        EXTRBLE.       TOTAL         TOTAL         TOTAL        EXTRBLE.      EXTRBLE.

               SUBM      CR            CR            CR            HG            HG            CO            CO            AG
                 ID     MG/L          MG/L          MG/L          MG/L          UG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)            5(3)          4(0)                        5(4)                        4(0)
           LOW           L.001          .186                      L.0001                        .003
          HIGH            .010          .886                       .0042                        .007
       AVERAGE            .005*         .386                       .0009*                       .005
      STD.DEV.            .005*         .334                       .0018*                       .002
   PERCNT:10TH
          25TH           L.001          .204                      L.0001                        .004
   MEDIAN 50TH            .003          .236                      L.0001                        .005
          75TH            L.01          .569                      L.0001                        .007
          90TH
SECONDARY CODE
                       29009L        29305L        28009L        28302L        48009L        48302L        82009L        82302L
                       COPPER        COPPER        NICKEL        NICKEL       CADMIUM       CADMIUM         LEAD          LEAD
                        TOTAL       EXTRBLE.       TOTAL        EXTRBLE.       TOTAL        EXTRBLE.       TOTAL        EXTRBLE.

               SUBM      CU            CU            NI            NI            CD            CD            PB            PB
                 ID     MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)            4(0)                        4(0)                        4(1)                        2(0)          2(1)
           LOW            .020                        .016                       L.001                        .005         L.003
          HIGH            .088                        .040                        .003                        .014          .014
       AVERAGE            .049                        .028                        .002*                       .010          .008*
      STD.DEV.            .029                        .012                        .001*                       .006          .008*
   PERCNT:10TH
          25TH            .029                        .018                        .001*
   MEDIAN 50TH            .044                        .028                        .003                        .010          .008*
          75TH            .069                        .038                        .003
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE  24                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                        INDUSTRIAL MONITORING
STATION 20AL05EB1401    LAT. 53D 33M  6S  LONG. 113D 23M 38S   PR 3   UTM 12 341400E 5936100N  FOR NOV 03, 1981 TO AUG 16, 1984
IMPERIAL OIL LTD STRATHCONA                 FINAL EFFLUENT COMP.
S36 T52 R24 W4M

                           30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                            ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                           TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                  SUBM      ZN          ZN          MN          MN          V           MO          MO          SB
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             4(0)                    4(0)                    3(0)                    3(0)
           LOW              .209                    .062                    .009                    .008
          HIGH             1.280                    .229                    .020                    .012
       AVERAGE              .510                    .129                    .013                    .009
      STD.DEV.              .514                    .080                    .006                    .002
  PERCNT:10TH
          25TH              .234                    .065
   MEDIAN 50TH              .276                    .112                    .009                    .008
          75TH              .786                    .193
          90TH
SECONDARY CODE

                           33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                           ARSENIC     ARSENIC    SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                           TOTAL      DISSOLVED   TOTAL       DISSOLVED   DISSOLVED   EXTRBLE.   DISSOLVED    EXTRBLE.

                  SUBM      AS          AS          SE          SE          AL          AL          BE          BE
                   ID      MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             2(0)                    2(2)                                3(0)                    3(3)
           LOW             .0056                   L.0002                               .054                   L.001
          HIGH             .0089                   L.0002                              6.600                   L.001
       AVERAGE             .0073                                                       2.295
      STD.DEV.             .0023                                                       3.730
  PERCNT:10TH
          25TH
   MEDIAN 50TH             .0073                   L.0002                               .230                   L.001
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  25                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB1409    LAT. 53D 33M  6S  LONG. 113D 23M 38S   PR 3   UTM 12 341400E 5936100N  FOR JUN 20, 1983 TO JUN 20, 1983
IMPERIAL OIL LTD STRATHCONA               STORM WATER POND - EFFLUENT GRAB

                        02061F        10301L        10301F        10151L        10101L       02041L        97160S         97163S
                      TEMPERATURE       PH            PH        ALKALINITY    ALKALINITY    SPECIFIC     DISCHARGE      DISCHARGE
                      OF WATER                                    PHENOL        TOTAL       CONDUCT.      INSTANT         DAILY
                                                                PHTHALEIN                                                  MEAN
               SUBM                                               CACO3         CACO3
                ID     DEG.C          PH UNITS      PH UNITS      MG/L          MG/L          US/CM         M3/S           CFS
SAMPLES(FLAGS)            1(0)          1(0)                      1(0)          1(0)          1(0)
           LOW             17.           7.0                        .0           58.          511.
          HIGH             17.           7.0                        .0           58.          511.
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                        06201L        06202L        06301L        20103L        20105L       10602L        10604L         97160S
                      BICARBONT.    BICARBONT.    CARBONATE     CALCIUM       CALCIUM      HARDNESS      HARDNESS       DISCHARGE
                       (CALCD.)      (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED     TOTAL         TOTAL          INSTANT
                                                                             (CALCD.)     (CALCD.)
               SUBM     HCO3          HCO3           CO3           CA            CA          CACO3         CACO3
                ID     MG/L           MG/L          MG/L          MG/L          MG/L          MG/L          MG/L           M3/S
SAMPLES(FLAGS)            1(0)                        1(0)          1(0)                      1(0)
           LOW             71.                          0.           43.                      140.3
          HIGH             71.                          0.           43.                      140.3
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                                  10L

                        11103L        12102L        19103L        09107L        17203L       16306L        26009L         26304L
                       SODIUM       MAGNESIUM     POTASSIUM     FLUORIDE      CHLORIDE      SULPHATE       IRON           IRON
                      DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED      TOTAL          EXTRBLE.

               SUBM      NA            MG             K             F             CL           SO4           FE             FE
                ID      MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L           MG/L
SAMPLES(FLAGS)            1(0)          1(0)          1(0)          1(0)          1(0)          1(0)                        1(0)
           LOW             31.            8.           3.0           .94           52.           85.                        3.49
          HIGH             31.            8.           3.0           .94           52.           85.                        3.49
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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                                               NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 20AL05EB1409    LAT. 53D 33M  6S  LONG. 113D 23M 38S   FR 3   UTM 12 341400E 5936100N  FOR JUN 20, 1983 TO JUN 20, 1983
IMPERIAL OIL LTD STRATHCONA                STORM WATER POND - EFFLUENT GRAB

                       07105L      07205L      07562L      07021L      07906L      07905L      15421L      97160S
                      NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN   PHOSPHORUS  DISCHARGE
                      DISSOLVED   DISSOLVED   DISSOLVED    TOTAL    PARTICULATE PARTICULATE    TOTAL      INSTANT
                      NO3 & NO2    NITRITE    AMMONIA     KJELDAHL     TOTAL      (CALCD.)
                 SUBM    N            N          N           N           N           N
                  ID    MG/L        MG/L       MG/L        MG/L        MG/L        MG/L          P
SAMPLES(FLAGS)          1(0)        1(0)       1(0)        1(0)        1(0)                    MG/L        M3/S
           LOW           .92         .47        .480       2.100        .88                    1(0)
          HIGH           .92         .47        .480       2.100        .88                     .365
       AVERAGE                                                                                  .365
      STD.DEV.
  PERCNT:10TH
          25TH
    MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                       10474L      10407L      10511L      10453L      14101L      97160S      97163S
                       RESIDUE     RESIDUE     RESIDUE     RESIDUE     SILICA     DISCHARGE   DISCHARGE
                        TOTAL   NONFILTRABLE  VOLATILE   FILTRABLE   REACTIVE     INSTANT      DAILY
                                             NONFILTR.                                         MEAN
                 SUBM                        (CALCD.)                  SIO2
                  ID   MG/L        MG/L        MG/L        MG/L        MG/L        M3/S         CFS
SAMPLES(FLAGS)          1(0)        1(0)                   1(0)        1(0)
           LOW          603.        203.                   430.         4.0
          HIGH          603.        203.                   430.         4.0
       AVERAGE
      STD.DEV.
  PERCNT:10TH
          25TH
    MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                                          02L

                       00205L      02074L      06537L      06524L      02001L      16101L      10701L      06608L
                        TOTAL     TURBIDITY    PHENOLIC    OIL AND      ODOUR     SULPHIDE    SURFACT.     CYANIDE
                      DISSOLVED                MATERIAL    GREASE    THRESHOLD   DISSOLVED    N-ALKYL
                       SOLIDS                                          NUMBER                SULPHNTS.
                 SUBM                          PHENOL                                S          LAS          CN
                  ID   MG/L        NTU         MG/L        MG/L         TON        MG/L        MG/L        MG/L
SAMPLES(FLAGS)          1(0)        1(0)       1(0)        1(0)                                1(0)
           LOW          261.       100.0        .364        7.6                                 .40
          HIGH          261.       100.0        .364        7.6                                 .40
       AVERAGE
      STD.DEV.
  PERCNT:10TH
          25TH
    MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
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REQUEST 0007 -  0009 PAGE  27                         NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                         INDUSTRIAL MONITORING
STATION 20AL05EB1409    LAT. 53D 33M  6S  LONG. 113D 23M 38S   PR 3   UTM 12 341400E 5936100N  FOR JUN 20, 1983 TO JUN 20, 1983
IMPERIAL OIL LTD STRATHCONA               STORM WATER POND - EFFLUENT GRAB

                          08304L      08202L       06107L      06154L      06001L      06051L      06006L      06905L
                          OXYGEN      OXYGEN       CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                           TOTAL     BIOCHEM.     DISSOLVED   DISSOLVED     TOTAL       TOTAL      TOTAL     PARTICULATE
                            COD     DEMAND-BOD    ORGANIC     INORGANIC    ORGANIC    INORGANIC                 TOTAL
                  SUBM      02          02           C           C           C           C           C           C
                   ID     MG/L        MG/L         MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             1(0)                     1(0)        1(0)                                             1(0)
           LOW             154.1                    31.0        15.0                                             8.30
          HIGH             154.1                    31.0        15.0                                             8.30
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
                          24101L      24009L       24302L      80015L      80011L      27009L      27302L      47304L
                         CHROMIUM    CHROMIUM     CHROMIUM    MERCURY     MERCURY      COBALT      COBALT      SILVER
                        HEXAVALENT    TOTAL       EXTRBLE.     TOTAL       TOTAL       TOTAL      EXTRBLE.    EXTRBLE.

                  SUBM      CR          CR           CR          HG          HG          CO          CO          AG
                   ID     MG/L        MG/L         MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             1(1)        1(0)                     1(1)                    1(0)
           LOW             L.001        .098                    L.0001                   .006
          HIGH             L.001        .098                    L.0001                   .006
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
                          29009L      29305L       28009L      28302L      48009L      48302L      82009L      82302L
                          COPPER      COPPER       NICKEL      NICKEL      CADMIUM     CADMIUM      LEAD        LEAD
                           TOTAL     EXTRBLE.      TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.

                  SUBM      CU          CU           NI          NI          CD          CD          PB          PB
                   ID     MG/L        MG/L         MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             1(0)                     1(0)                    1(1)                                 1(0)
           LOW              .018                     .041                   L.001                                 .008
          HIGH              .018                     .041                   L.001                                 .008
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE  28                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB1409    LAT. 53D 33M  6S  LONG. 113D 23M 38S   PR 3   UTM 12 341400E 5936100N  FOR JUN 20, 1983 TO JUN 20, 1983
IMPERIAL OIL LTD STRATHCONA              STORM WATER POND - EFFLUENT GRAB

                          30009L       30305L       25003L       25304L       23009L       42304L       42009L       51003L
                           ZINC         ZINC       MANGANESE    MANGANESE    VANADIUM    MOLYBDENUM   MOLYBDENUM    ANTIMONY
                          TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL        TOTAL

                   SUBM     ZN           ZN           MN           MN           V            MO           MO           SB
                    ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             1(0)                      1(0)                      1(0)                      1(1)
           LOW              .153                      .186                      .015                     L.001
          HIGH              .153                      .186                      .015                     L.001
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                          33005L       33104L       34005L       34102L       13111L       13306L       04102L       04304L
                          ARSENIC      ARSENIC     SELENIUM     SELENIUM     ALUMINUM     ALUMINUM    BERYLLIUM    BERYLLIUM
                         TOTAL       DISSOLVED    TOTAL        DISSOLVED    DISSOLVED     EXTRBLE.    DISSOLVED     EXTRBLE.

                   SUBM     AS           AS           SE           SE           AL           AL           BE           BE
                    ID     MG/L         MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)                                                                             1(0)                      1(1)
           LOW                                                                             4.090                     L.001
          HIGH                                                                             4.090                     L.001
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  29                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB1800    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR APR 28, 1980 TO APR 18, 1984
TEXACO CANADA LTD EDMONTON                FINAL EFFLUENT GRAB
NW S31 T52 R23 W4M
                        02061F       10301L       10301F       10151L       10101L       02041L       97160S       97163S
                     TEMPERATURE       PH           PH       ALKALINITY   ALKALINITY    SPECIFIC    DISCHARGE    DISCHARGE
                      OF WATER                                 PHENOL        TOTAL      CONDUCT.     INSTANT       DAILY
                                                             PHTHALEIN                                               MEAN
                 SUBM                                          CACO3        CACO3
                  ID    DEG.C       PH UNITS     PH UNITS      MG/L         MG/L        US/CM         M3/S          CFS
SAMPLES(FLAGS)            2(0)        3(0)                      3(0)         3(0)        3(0)                      3(0)
           LOW            44.0         7.3                        .0         94.2        1148.                      .78
          HIGH            48.0         7.5                        .0         141.        1613.                      .96
       AVERAGE            46.0                                    .0        111.7        1351.                    .8567
      STD.DEV.             2.8                                    .0         25.5         238.                    .0929
   PERCNT:10TH
          25TH
   MEDIAN 50TH            46.0        7.30                        .0         100.        1292.                      .83
          75TH
          90TH
SECONDARY CODE
                        06201L       06202L       06301L       20103L       20105L       10602L       10604L       97160S
                      BICARBONT.   BICARBONT.   CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS    DISCHARGE
                       (CALCD.)     (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED      TOTAL        TOTAL       INSTANT
                                                                          (CALCD.)     (CALCD.)
                 SUBM    HCO3         HCO3          CO3          CA           CA         CACO3        CACO3
                  ID    MG/L          MG/L         MG/L         MG/L         MG/L        MG/L         MG/L         M3/S
SAMPLES(FLAGS)            3(0)        1(0)         3(0)         2(0)         2(0)        2(0)         1(0)
           LOW            115.        115.           0.         69.0         69.0        258.8        296.
          HIGH            172.        115.           0.         110.         87.1        402.3        296.
       AVERAGE            136.                       0.         89.5         78.0        330.5
      STD.DEV.             31.                       0.         29.0         12.8        101.5
   PERCNT:10TH
          25TH
   MEDIAN 50TH            122.                       0.         89.5         78.0        330.5
          75TH
          90TH
SECONDARY CODE                                                 10L
                        11103L       12102L       19103L       09107L       17203L       16306L       26009L       26304L
                        SODIUM      MAGNESIUM    POTASSIUM    FLUORIDE     CHLORIDE     SULPHATE      IRON         IRON
                      DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL       EXTRBLE.

                 SUBM     NA           MG            K            F            CL          SO4          FE           FE
                  ID    MG/L          MG/L         MG/L         MG/L         MG/L        MG/L         MG/L         MG/L
SAMPLES(FLAGS)            3(0)        3(0)         3(0)         3(0)         3(0)        3(0)                      3(0)
           LOW           119.0         19.         4.40         .240       165.00        148.                      .250
          HIGH            149.         31.          7.1          .34         290.        285.                       .72
       AVERAGE           135.3        23.7         5.47         .287       229.33       213.7                      .497
      STD.DEV.            15.2         6.4         1.44         .050        62.58        68.7                      .236
   PERCNT:10TH
          25TH
   MEDIAN 50TH            138.        21.0          4.9          .28         233.       208.0                       .52
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  30                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                    INDUSTRIAL MONITORING
STATION 20AL05EB1800    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR APR 28, 1980 TO APR 18, 1984
TEXACO CANADA LTD EDMONTON                  FINAL EFFLUENT GRAB
NW S31 T52 R23 W4M

                          07105L     07205L     07562L     07021L     07906L      07905L      15421L      97160S
                         NITROGEN   NITROGEN   NITROGEN   NITROGEN   NITROGEN    NITROGEN   PHOSPHORUS  DISCHARGE
                         DISSOLVED  DISSOLVED  DISSOLVED   TOTAL    PARTICULATE PARTICULATE   TOTAL      INSTANT
                         NO3 & NO2  NITRITE    AMMONIA    KJELDAHL    TOTAL      (CALCD.)
                  SUBM      N          N          N          N          N           N           P
                   ID     MG/L       MG/L       MG/L       MG/L       MG/L        MG/L        MG/L
SAMPLES(FLAGS)            3(3)       3(3)       3(0)       2(0)       1(0)                    2(0)       M3/S
           LOW            L.05       L.05        .250      3.020       .82                     .850
          HIGH            L.050      L.050      3.950      3.600       .82                     .899
       AVERAGE                                  2.100      3.310                               .875
      STD.DEV.                                  1.850       .410                               .035
  PERCNT:10TH
          25TH
   MEDIAN 50TH            L.05       L.05       2.100      3.310                               .875
          75TH
          90TH
SECONDARY CODE                                  61L        15L                                 19L

                          10474L     10407L      10511L     10453L     14101L     97160S      97163S
                          RESIDUE    RESIDUE     RESIDUE    RESIDUE    SILICA    DISCHARGE   DISCHARGE
                          TOTAL    NONFILTRABLE  VOLATILE  FILTRABLE  REACTIVE    INSTANT      DAILY
                                                 NONFILTR.                                     MEAN
                  SUBM                           (CALCD.)              SIO2
                   ID     MG/L        MG/L       MG/L        MG/L      MG/L       M3/S         CFS
SAMPLES(FLAGS)            2(0)        3(0)                   1(0)      3(0)                    3(0)
           LOW            1013.       19.6                   1240.      3.90                    .78
          HIGH            1278.       38.                    1240.      8.1                     .96
       AVERAGE            1145.5      30.2                              5.87                    .8567
      STD.DEV.             187.4       9.5                              2.11                    .0929
  PERCNT:10TH
          25TH
   MEDIAN 50TH            1145.5      33.                               5.6                     .83
          75TH
          90TH
SECONDARY CODE                                                         02L

                          00205L     02074L     06537L     06524L     02001L     16101L      10701L      06608L
                          TOTAL     TURBIDITY   PHENOLIC   OIL AND     ODOUR    SULPHIDE    SURFACT.     CYANIDE
                         DISSOLVED              MATERIAL   GREASE   THRESHOLD  DISSOLVED    N-ALKYL
                          SOLIDS                                      NUMBER               SULPHNTS.
                  SUBM                          PHENOL                            S           LAS          CN
                   ID     MG/L        NTU       MG/L       MG/L        TON       MG/L        MG/L        MG/L
SAMPLES(FLAGS)            3(0)        2(0)      3(0)       3(0)       3(0)       3(2)        2(0)
           LOW            643.2       25.0       .330      1.500        1.       L.02         .59
          HIGH            930.        25.5       .416      8.5       1000.        .08        1.12
       AVERAGE            763.7       25.3       .376      4.633      667.        .040*       .855
      STD.DEV.            148.8         .4       .043      3.557      577.        .035*       .375
  PERCNT:10TH
          25TH
   MEDIAN 50TH            718.        25.3       .381      3.9       1000.       L.020        .855
          75TH
          90TH
SECONDARY CODE                        73L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  31                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 20AL05EB1800    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR APR 28, 1980 TO APR 18, 1984
TEXACO CANADA LTD EDMONTON               FINAL EFFLUENT GRAB
NW S31 T52 R23 W4M

                           08304L       08202L       06107L       06154L       06001L       06051L       06006L       06905L
                           OXYGEN       OXYGEN       CARBON       CARBON       CARBON       CARBON       CARBON       CARBON
                             TOTAL      BIOCHEM.     DISSOLVED    DISSOLVED     TOTAL        TOTAL      TOTAL        PARTICULATE
                              COD       DEMAND-BOD    ORGANIC     INORGANIC     ORGANIC     INORGANIC                  TOTAL
                  SUBM       02            02           C            C            C            C            C            C
                   ID      MG/L          MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)              3(0)                       1(0)         1(0)         1(0)         1(0)         1(0)         1(0)
           LOW              72.0                       12.0         27.0         29.          24.          53.          16.00
          HIGH              93.6                       12.0         27.0         29.          24.          53.          16.00
       AVERAGE              80.8
      STD.DEV.              11.4
   PERCNT:10TH
          25TH
   MEDIAN 50TH              76.7
          75TH
          90TH
SECONDARY CODE

                           24101L       24009L       24302L       80015L       80011L       27009L       27302L       47304L
                          CHROMIUM     CHROMIUM     CHROMIUM     MERCURY      MERCURY      COBALT       COBALT       SILVER
                         HEXAVALENT     TOTAL        EXTRBLE.     TOTAL        TOTAL        TOTAL        EXTRBLE.     EXTRBLE.

                  SUBM       CR           CR           CR           HG           HG           CO           CO           AG
                   ID      MG/L         MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)              3(1)         3(0)                      3(2)                      3(2)
           LOW             L.001         .025                     L.0001                    L.001
          HIGH              .006         .968                      .0002                     .03
       AVERAGE              .003*        .393                      .0001*                    .011*
      STD.DEV.              .003*        .504                      .0001*                    .017*
   PERCNT:10TH
          25TH
   MEDIAN 50TH              .003         .187                     L.0001                    L.001
          75TH
          90TH
SECONDARY CODE

                           29009L       29305L       28009L       28302L       48009L       48302L       82009L       82302L
                           COPPER       COPPER       NICKEL       NICKEL       CADMIUM      CADMIUM      LEAD         LEAD
                            TOTAL       EXTRBLE.     TOTAL        EXTRBLE.     TOTAL        EXTRBLE.     TOTAL        EXTRBLE.

                  SUBM       CU           CU           NI           NI           CD           CD           PB           PB
                   ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)              3(0)                      3(0)                      3(2)                                    2(1)
           LOW              .003                      .011                     L.001                                   L.003
          HIGH              .012                      .013                      .002                                    .005
       AVERAGE              .006                      .012                      .001*                                   .004*
      STD.DEV.              .005                      .001                      .001*                                   .001*
   PERCNT:10TH
          25TH
   MEDIAN 50TH              .004                      .011                     L.001                                    .004*
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE  32                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 20AL05EB1800    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR APR 28, 1980 TO APR 18, 1984
TEXACO CANADA LTD EDMONTON                 FINAL EFFLUENT GRAB
NW S31 T52 R23 W4M

                           30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                            ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                           TOTAL      EXTRBLE.      TOTAL     EXTRBLE.      TOTAL     EXTRBLE.      TOTAL       TOTAL

                    SUBM     ZN          ZN          MN          MN          V           MO          MO          SB
                     ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              3(0)                    3(0)                    2(0)                    2(0)
           LOW              .012                    .056                    .004                    .005
          HIGH              .190                    .079                    .006                    .036
       AVERAGE              .102                    .068                    .005                    .021
      STD.DEV.              .089                    .012                    .001                    .022
   PERCNT:10TH
          25TH
   MEDIAN 50TH              .104                    .068                    .005                    .021

SECONDARY CODE

                           33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                           ARSENIC     ARSENIC     SELENIUM    SELENIUM    ALUMINUM    ALUMINUM    BERYLLIUM   BERYLLIUM
                          TOTAL       DISSOLVED   TOTAL       DISSOLVED   DISSOLVED    EXTRBLE.    DISSOLVED    EXTRBLE.

                    SUBM     AS          AS          SE          SE          AL          AL          BE          BE
                     ID     MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              1(0)                    1(1)                                2(0)                    2(2)
           LOW              .0018                   L.0002                              1.170                   L.001
          HIGH              .0018                   L.0002                              3.380                   L.001
       AVERAGE                                                                          2.275
      STD.DEV.                                                                          1.563
   PERCNT:10TH
          25TH
   MEDIAN 50TH                                                                          2.275                   L.001
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  33                         NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                        INDUSTRIAL MONITORING
STATION 20AL05EB1805    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR JUN 15, 1981 TO DEC 04, 1981
TEXACO CANADA LTD EDMONTON                DAF INFLUENT GRAB
NW S31 T52 R23 W4M

                       02061F        10301L        10301F        10151L        10101L        02041L        97160S        97163S
                     TEMPERATURE       PH            PH        ALKALINITY    ALKALINITY     SPECIFIC     DISCHARGE     DISCHARGE
                      OF WATER                                   PHENOL         TOTAL       CONDUCT.      INSTANT        DAILY
                                                               PHTHALEIN                                                 MEAN
                SUBM                                             CACO3         CACO3
                 ID    DEG.C        PH UNITS      PH UNITS        MG/L          MG/L         US/CM         M3/S           CFS
SAMPLES(FLAGS)          8(0)          9(0)          4(0)          9(0)          9(0)          9(0)                        9(0)
           LOW          37.0           6.7           7.3            .0          113.         1004.                         .58
          HIGH          50.0           7.7           7.8            .0          139.         2940.                        1.34
       AVERAGE          44.9                                        .0          124.7        1486.                        1.0600
      STD.DEV.           4.2                                        .0           10.1         707.                         .2789
   PERCNT:10TH
          25TH          43.3           7.1           7.45           .0          115.         1020.                         .82
   MEDIAN 50TH          44.5           7.3           7.65           .0          121.         1125.                        1.12
          75TH          48.5           7.5           7.75           .0          132.         1720.                        1.33
          90TH
SECONDARY CODE

                       06201L        06202L        06301L        20103L        20105L        10602L        10604L        97160S
                     BICARBONT.    BICARBONT.    CARBONATE      CALCIUM       CALCIUM      HARDNESS      HARDNESS      DISCHARGE
                      (CALCD.)      (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED       TOTAL         TOTAL         INSTANT
                                                                             (CALCD.)      (CALCD.)
                SUBM   HCO3          HCO3           CO3            CA            CA          CACO3         CACO3
                 ID    MG/L          MG/L           MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)          9(0)                        9(0)          9(0)          4(0)                        9(0)
           LOW          138.                         0.           51.           50.9                        185.
          HIGH          169.                         0.          132.           67.8                        442.
       AVERAGE          152.                         0.           86.9          61.8                        307.8
      STD.DEV.           12.                         0.           29.3           7.5                         85.3
   PERCNT:10TH
          25TH          140.                         0.           66.           56.8                        251.
   MEDIAN 50TH          147.                         0.           85.           64.2                        312.
          75TH          161.                         0.          104.           66.8                        353.
          90TH
SECONDARY CODE                                                    11L

                       11103L        12102L        19103L        09107L        17203L        16306L        26009L        26304L
                       SODIUM      MAGNESIUM     POTASSIUM      FLUORIDE      CHLORIDE      SULPHATE        IRON          IRON
                     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED       TOTAL        EXTRBLE.

                SUBM    NA            MG             K             F             CL            SO4            FE            FE
                 ID    MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          9(0)          9(0)          9(0)          9(0)          9(0)          9(0)          5(0)          4(0)
           LOW           86.           13.           2.8           .31          101.           80.           .09           .10
          HIGH          484.           27.           8.2           .46          860.          223.          1.01          1.18
       AVERAGE          181.2          21.7          4.49          .348         292.78        170.4          .546          .525
      STD.DEV.          148.2           5.5          2.03          .050         274.76         45.8          .374          .466
   PERCNT:10TH
          25TH           91.           19.           3.0           .32          126.          145.           .30           .210
   MEDIAN 50TH           93.           21.           3.3           .32          135.          189.           .51           .410
          75TH          240.           27.           5.5           .34          369.          196.           .82           .840
          90TH
SECONDARY CODE          11L           11L           11L           06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,6 OR Q
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                                                  NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB1805    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR JUN 15, 1981 TO DEC 04, 1981
TEXACO CANADA LTD EDMONTON                DAF INFLUENT GRAB
NW S31 T52 R23 W4M

                      07105L        07205L        07562L        07021L        07906L       07905L       15421L        97160S
                      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN     NITROGEN     PHOSPHORUS    DISCHARGE
                      DISSOLVED     DISSOLVED     DISSOLVED      TOTAL       PARTICULATE   PARTICULATE     TOTAL         INSTANT
                      NO3 & NO2      NITRITE       AMMONIA       KJELDAHL       TOTAL         (CALCD.)
               SUBM       N            N              N            N             N             N              P
                ID      MG/L          MG/L          MG/L          MG/L          MG/L       MG/L            MG/L          M3/S
SAMPLES(FLAGS)           9(4)          9(7)          9(0)          9(0)          4(0)                      9(0)
           LOW            .04          L.02           .45           1.7            .7                       .06
          HIGH            .07          L.05           4.0         5.000           1.1                      .800
       AVERAGE           .049*         .036*        1.998         3.639          .950                      .529
      STD.DEV.           .009*         .015*        1.062         1.209          .191                      .269
   PERCNT:10TH
          25TH            .04          L.02           1.1           3.2          .800                       .28
   MEDIAN 50TH           L.05           .04         2.200           4.0         1.000                      .600
          75TH           L.05          L.05         2.400         4.500         1.100                       .77
          90TH
SECONDARY CODE                                     61L           15L                                       19L

                       10474L       10407L         10511L        10453L        14101L      97160S         97163S
                      RESIDUE       RESIDUE        RESIDUE      RESIDUE        SILICA      DISCHARGE      DISCHARGE
                       TOTAL      NONFILTRABLE     VOLATILE     FILTRABLE     REACTIVE       INSTANT        DAILY
                                                  NONFILTR.                                                 MEAN
               SUBM                               (CALCD.)                      SIO2
                ID     MG/L           MG/L           MG/L         MG/L          MG/L         M3/S           CFS
SAMPLES(FLAGS)           9(0)          9(0)                        4(0)          9(0)                      9(0)
           LOW           566.           26.                        530.           4.7                       .58
          HIGH          1878.           64.                        640.           8.0                      1.34
       AVERAGE          962.9          43.0                       570.0          6.14                    1.0600
      STD.DEV.          489.0          10.6                        49.7          1.20                     .2789
   PERCNT:10TH
          25TH           618.          38.0                       535.0           5.3                       .82
   MEDIAN 50TH           740.          43.0                       555.0           6.0                      1.12
          75TH          1174.           48.                       605.0           6.4                      1.33
          90TH
SECONDARY CODE        71L            01L                                       02L

                       00205L       02074L         06537L        06524L        02001L        16101L        10701L        06608L
                       TOTAL        TURBIDITY       PHENOLIC    OIL AND         ODOUR       SULPHIDE      SURFACT.        CYANIDE
                      DISSOLVED                     MATERIAL   GREASE        THRESHOLD     DISSOLVED     N-ALKYL
                       SOLIDS                                                  NUMBER                    SULPHNTS.
               SUBM                                 PHENOL                                      S           LAS           CN
                ID      MG/L         NTU            MG/L          MG/L            TON          MG/L        MG/L           MG/L
SAMPLES(FLAGS)           9(0)          9(0)          9(0)          9(0)          8(0)          9(2)
           LOW           443.           7.7           .02           8.6            2.          L.05
          HIGH          1806.          24.0          .255          62.0          100.          3.08
       AVERAGE          877.3          14.8          .140        18.244           33.         1.090*
      STD.DEV.          497.4           6.4          .095        16.652           42.          .965*
   PERCNT:10TH
          25TH           530.           7.8          .079          11.7           10.           .52
   MEDIAN 50TH           692.          14.0           .10          13.2           10.           .81
          75TH          1086.          20.0          .250          16.5           60.          1.44
          90TH
SECONDARY CODE                                                   21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  35                         NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                        INDUSTRIAL MONITORING
STATION 20AL05EB1805    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR JUN 15, 1981 TO DEC 04, 1981
TEXACO CANADA LTD EDMONTON                  DAF INFLUENT GRAB
NW S31 T52 R23 W4M

                            08304L      08202L      06107L      06154L      06001L      06051L      06006L      06905L
                            OXYGEN      OXYGEN      CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                             TOTAL     BIOCHEM.    DISSOLVED   DISSOLVED     TOTAL       TOTAL     TOTAL     PARTICULATE
                               COD    DEMAND-BOD    ORGANIC    INORGANIC    ORGANIC   INORGANIC               TOTAL
                 SUBM         02          02          C           C           C           C           C           C
                  ID        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)               9(0)                    4(0)        4(0)        5(0)                                4(0)
           LOW               83.                     20.         38.         15.6                                10.
          HIGH               309.                    23.         45.         39.0                                18.
       AVERAGE               162.8                   21.00       42.25       25.62                               13.50
      STD.DEV.                81.0                    1.41        3.10        9.21                                3.42
   PERCNT:10TH
          25TH               116.3                   20.00       40.00       21.4                                11.00
   MEDIAN 50TH               124.4                   20.50       43.00       21.5                                13.00
          75TH               196.                    22.00       44.50       30.6                                16.00
          90TH
SECONDARY CODE              01L                                              07L

                            24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                           CHROMIUM    CHROMIUM    CHROMIUM     MERCURY     MERCURY     COBALT      COBALT      SILVER
                          HEXAVALENT    TOTAL      EXTRBLE.     TOTAL       TOTAL       TOTAL      EXTRBLE.    EXTRBLE.

                 SUBM        CR          CR          CR          HG          HG          CO          CO          AG
                  ID        MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)               9(8)        9(0)                    9(0)                    9(8)                    5(5)
           LOW               L.001       .07                     .0002                   L.001                   L.02
          HIGH               .01         .53                     .0006                   L.01                    L.02
       AVERAGE               .006*       .286                    .0003                    .006*
      STD.DEV.               .005*       .133                    .0001                    .005*
   PERCNT:10TH
          25TH               L.001       .256                    .0002                   L.001                   L.02
   MEDIAN 50TH               L.01        .277                    .0003                   L.01                    L.02
          75TH               L.01        .35                     .0003                   L.01                    L.02
          90TH
SECONDARY CODE

                            29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                            COPPER      COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM     LEAD        LEAD
                            TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.

                 SUBM        CU          CU          NI          NI          CD          CD          PB          PB
                  ID        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)               9(2)                    9(4)                    9(9)                    4(0)        5(3)
           LOW               L.005                   .006                    L.001                   .008        L.02
          HIGH               .016                    .04                     L.01                    .009        .03
       AVERAGE               .010*                   .017*                                           .009        .022*
      STD.DEV.               .004*                   .011*                                           .001        .004*
   PERCNT:10TH
          25TH               .006                    .008                    L.001                   .008        L.02
   MEDIAN 50TH               .010                    L.02                    L.01                    .009        L.02
          75TH               .013                    L.02                    L.01                    .009        .02
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 - 0012 PAGE 36 NAQUADAT SUMMARY REPORT JAN 08, 1986
INDUSTRIAL MONITORING
STATION 20AL05EB1805 LAT. 53D 33M 8S LONG. 113D 22M 52S PR 3 UTM 12 342250E 5936100N FOR JUN 15, 1981 TO DEC 04, 1981
TEXACO CANADA LTD EDMONTON DAF INFLUENT GRAB
NW S31 T52 R23 W4M

	30009L ZINC TOTAL	30305L ZINC EXTRBLE.	25003L MANGANESE TOTAL	25304L MANGANESE EXTRBLE.	23009L VANADIUM TOTAL	42304L MOLYBDENUM EXTRBLE.	42009L MOLYBDENUM TOTAL	51003L ANTIMONY TOTAL
SUBM ID	ZN MG/L	ZN MG/L	MN MG/L	MN MG/L	V MG/L	MO MG/L	MO MG/L	SB MG/L
SAMPLES(FLAGS)	9(0)		9(0)		5(3)		5(5)	5(0)
LOW	.06		.031		L.01		L.02	.0024
HIGH	.139		.068		.06		L.02	.006
AVERAGE	.101		.046		.020*			.0037
STD.DEV.	.028		.012		.022*			.0014
PERCNT:10TH								
25TH	.08		.039		L.01		L.02	.003
MEDIAN 50TH	.11		.043		L.01		L.02	.003
75TH	.12		.052		.01		L.02	.004
90TH								
SECONDARY CODE								

	33005L ARSENIC TOTAL	33104L ARSENIC DISSOLVED	34005L SELENIUM TOTAL	34102L SELENIUM DISSOLVED	13111L ALUMINUM DISSOLVED	13306L ALUMINUM EXTRBLE.	04102L BERYLLIUM DISSOLVED	04304L BERYLLIUM EXTRBLE.
SUBM ID	AS MG/L	AS MG/L	SE MG/L	SE MG/L	AL UG/L	AL MG/L	BE MG/L	BE MG/L
SAMPLES(FLAGS)	5(1)		5(0)		5(0)		5(4)	
LOW	L.001		.001		110.		L.005	
HIGH	.007		.011		1720.		.005	
AVERAGE	.0026*		.0044		1172.80		.005*	
STD.DEV.	.0026*		.0040		651.27		.000*	
PERCNT:10TH								
25TH	.001		.002		1164.		L.005	
MEDIAN 50TH	.001		.003		1180.		L.005	
75TH	.003		.005		1690.		L.005	
90TH								
SECONDARY CODE			07L					

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0001 -  0003 PAGE  37                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 20AL05EB1806    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR JUN 16, 1981 TO DEC 03, 1981
TEXACO CANADA LTD EDMONTON                 DAF INFLUENT COMP.
NW S31 T52 R23 W4M

                        02061F      10301L      10301F      10151L      10101L      02041L      97160S      97163S
                        TEMPERATURE PH          PH          ALKALINITY  ALKALINITY  SPECIFIC    DISCHARGE   DISCHARGE
                        OF WATER                            PHENOL      TOTAL       CONDUCT.    INSTANT     DAILY
                                                            PHTHALEIN                                       MEAN
                  SUBM
                   ID   DEG.C       PH UNITS    PH UNITS    CACO3       CACO3       US/CM       M3/S        CFS
                                                            MG/L        MG/L
      SAMPLES(FLAGS)        1(0)        6(0)        3(0)        6(0)        6(0)        6(0)                    6(0)
                 LOW        27.0         7.0         7.4          .0        110.       1015.                     .76
                HIGH        27.0         7.5         7.6          .0        134.       2910.                    1.34
             AVERAGE                                              .0       122.3       1623.                  1.0883
            STD.DEV.                                              .0        11.5        873.                   .2481
         PERCNT:10TH
                25TH                     7.0                      .0        111.       1058.                     .82
         MEDIAN 50TH                    7.30         7.5          .0       123.5       1091.                  1.1400
                75TH                     7.4                      .0        132.       2570.                    1.33
                90TH
      SECONDARY CODE

                        06201L      06202L      06301L      20103L      20105L      10602L      10604L      97160S
                        BICARBONT.  BICARBONT.  CARBONATE   CALCIUM     CALCIUM     HARDNESS    HARDNESS    DISCHARGE
                        (CALCD.)    (CALCD.)    (CALCD.)    DISSOLVED   DISSOLVED   TOTAL       TOTAL       INSTANT
                                                                        (CALCD.)    (CALCD.)
                  SUBM
                   ID   HCO3        HCO3        CO3         CA          CA          CACO3       CACO3       M3/S
                        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
      SAMPLES(FLAGS)        6(0)                    6(0)        6(0)        3(0)                    6(0)
                 LOW        134.                      0.         46.        45.9                    189.
                HIGH        163.                      0.        129.        66.7                    432.
             AVERAGE        149.                      0.        85.3        57.1                   302.0
            STD.DEV.         14.                      0.        35.3        10.5                    96.2
         PERCNT:10TH
                25TH        135.                      0.         59.                                225.
         MEDIAN 50TH        151.                      0.        79.0        58.7                   294.5
                75TH        161.                      0.        120.                                377.
                90TH
      SECONDARY CODE                                             11L

                        11103L      12102L      19103L      09107L      17203L      16306L      26009L      26304L
                        SODIUM      MAGNESIUM   POTASSIUM   FLUORIDE    CHLORIDE    SULPHATE    IRON        IRON
                        DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   TOTAL       EXTRBLE.
                  SUBM
                   ID   NA          MG          K           F           CL          SO4         FE          FE
                        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
      SAMPLES(FLAGS)        6(0)        6(0)        6(0)        6(0)        6(0)        6(0)        3(0)        3(0)
                 LOW         86.         18.         2.8         .18        118.        125.         .35         .15
                HIGH        472.         27.         8.1         .34        843.        276.         .54         .32
             AVERAGE       209.7        21.0        4.67        .288      354.83       184.8        .450        .223
            STD.DEV.       184.2         3.6        2.28        .059      338.69        56.1        .095        .087
         PERCNT:10TH
                25TH         90.         19.         2.9         .26        125.        140.
         MEDIAN 50TH        94.5        19.0        3.70        .315      154.00       179.5         .46         .20
                75TH        421.         24.         6.8         .32        735.        209.
                90TH
      SECONDARY CODE         11L         11L         11L         06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  38                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                      INDUSTRIAL MONITORING
STATION 20AL05EB1806    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR JUN 16, 1981 TO DEC 03, 1981
TEXACO CANADA LTC EDMONTON               DAF INFLUENT COMP.
NW S31 T52 R23 W4M
                         07105L      07205L      07562L      07021L      07906L      07905L      15421L      97160S
                        NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN   PHOSPHORUS  DISCHARGE
                        DISSOLVED   DISSOLVED   DISSOLVED    TOTAL    PARTICULATE PARTICULATE   TOTAL       INSTANT
                        NO3 & NO2   NITRITE     AMMONIA     KJELDAHL     TOTAL      (CALCD.)
                 SUBM       N           N           N           N           N           N           P
                  ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)             6(3)        6(6)        6(0)        6(0)        3(0)                    6(0)
           LOW              .04        L.02         .17         1.0         1.5                     .45
          HIGH              .05        L.05        1.700       5.000        2.1                     .800
       AVERAGE              .048*                   .823       2.888       1.833                    .607
      STD.DEV.              .004*                   .565       1.765        .306                    .152
   PERCNT:10TH
          25TH             L.05        L.02         .28         1.0                                 .47
   MEDIAN 50TH             L.050       L.035        .860       2.815        1.9                     .570
          75TH              .05        L.05        1.07        4.700                                .780
          90TH
SECONDARY CODE                                      61L         15L                                19L

                         10474L      10407L      10511L      10453L      14101L      97160S      97163S
                         RESIDUE     RESIDUE     RESIDUE     RESIDUE     SILICA     DISCHARGE   DISCHARGE
                          TOTAL    NONFILTRABLE  VOLATILE   FILTRABLE   REACTIVE     INSTANT      DAILY
                                                NONFILTR.                                          MEAN
                 SUBM                            (CALCD.)                  SIO2
                  ID      MG/L        MG/L        MG/L        MG/L        MG/L        M3/S         CFS
SAMPLES(FLAGS)             6(0)        6(0)                    3(0)        6(0)                    6(0)
           LOW             608.        34.6                    560.         5.0                     .76
          HIGH            1804.        51.                     640.         7.0                    1.34
       AVERAGE            1044.5       44.3                    596.7        5.87                   1.0883
      STD.DEV.             547.1        5.7                     40.4         .84                    .2481
   PERCNT:10TH
          25TH             632.        42.                                  5.2                     .82
   MEDIAN 50TH             773.5       45.0                    590.         5.80                   1.1400
          75TH            1676.        48.                                  6.4                    1.33
          90TH
SECONDARY CODE             71L         01L                                 02L

                         00205L      02074L      06537L      06524L      02001L      16101L      10701L      06608L
                          TOTAL     TURBIDITY   PHENOLIC    OIL AND      ODOUR      SULPHIDE    SURFACT.     CYANIDE
                        DISSOLVED               MATERIAL    GREASE     THRESHOLD   DISSOLVED    N-ALKYL
                         SOLIDS                                          NUMBER                SULPHNTS.
                 SUBM                            PHENOL                                  S          LAS          CN
                  ID      MG/L        NTU         MG/L        MG/L        TON         MG/L        MG/L        MG/L
SAMPLES(FLAGS)             6(0)        6(0)        6(0)        6(0)        6(0)
           LOW             486.        12.0        .058        13.6          2.
          HIGH            1800.        35.0        .240        28.9         10.
       AVERAGE             958.0       23.8        .126        20.600        9.
      STD.DEV.             610.3        8.6        .074         5.899        3.
   PERCNT:10TH
          25TH             522.        18.0        .069        14.9         10.
   MEDIAN 50TH             635.0       24.0        .097        20.500       10.
          75TH            1670.        30.0        .195        25.2         10.
          90TH
SECONDARY CODE                                                 21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  39                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB1806    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR JUN 16, 1981 TO DEC 03, 1981
TEXACO CANADA LTD EDMONTON                DAF INFLUENT COMP.
NW S31 T52 R23 W4M
                    08304L        08202L        06107L        06154L        06001L        06051L        06006L        06905L
                    OXYGEN        OXYGEN        CARBON        CARBON        CARBON        CARBON        CARBON        CARBON
                    TOTAL         BIOCHEM.      DISSOLVED     DISSOLVED     TOTAL         TOTAL         TOTAL         PARTICULATE
                    COD           DEMAND-BOD    ORGANIC       INORGANIC     ORGANIC       INORGANIC                   TOTAL
               SUBM 02            02            C             C             C             C             C             C
               ID   MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)      6(0)                        3(0)          3(0)          3(0)                                      3(0)
           LOW      32.                         20.           44.           32.6                                      19.
          HIGH      176.                        24.           45.           38.6                                      27.
       AVERAGE      118.8                       22.00         44.67         34.77                                     23.00
      STD.DEV.      62.8                        2.00          .58           3.33                                      4.00
   PERCNT:10TH
          25TH      46.0
   MEDIAN 50TH      148.4                       22.           45.           33.1                                      23.
          75TH      162.0
          90TH
SECONDARY CODE      01L                                                     07L
                    24101L        24009L        24302L        80015L        80011L        27009L        27302L        47304L
                    CHROMIUM      CHROMIUM      CHROMIUM      MERCURY       MERCURY       COBALT        COBALT        SILVER
                    HEXAVALENT    TOTAL         EXTRBLE.      TOTAL         TOTAL         TOTAL         EXTRBLE.      EXTRBLE.

               SUBM CR            CR            CR            HG            HG            CO            CO            AG
               ID   MG/L          MG/L          MG/L          MG/L          UG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)      6(3)          6(0)                        6(0)                        6(3)                        3(3)
           LOW      .005          .25                         .0001                       .002                        L.02
          HIGH      .010          .354                        .0007                       L.01                        L.02
       AVERAGE      .008*         .288                        .0003                       .006*
      STD.DEV.      .002*         .047                        .0002                       .004*
   PERCNT:10TH
          25TH      .006          .251                        .0002                       .003
   MEDIAN 50TH      L.010         .265                        .0003                       .007*                       L.02
          75TH      L.01          .341                        .0005                       L.01
          90TH
SECONDARY CODE
                    29009L        29305L        28009L        28302L        48009L        48302L        82009L        82302L
                    COPPER        COPPER        NICKEL        NICKEL        CADMIUM       CADMIUM       LEAD          LEAD
                    TOTAL         EXTRBLE.      TOTAL         EXTRBLE.      TOTAL         EXTRBLE.      TOTAL         EXTRBLE.

               SUBM CU            CU            NI            NI            CD            CD            PB            PB
               ID   MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)      6(0)                        6(3)                        6(6)                        3(0)          3(3)
           LOW      .015                        .009                        L.001                       .013          L.02
          HIGH      .035                        L.02                        L.01                        .015          L.02
       AVERAGE      .024                        .016*                                                   .014
      STD.DEV.      .009                        .005*                                                   .001
   PERCNT:10TH
          25TH      .015                        .011                        L.001
   MEDIAN 50TH      .023                        .017*                       L.005                       .013          L.02
          75TH      .034                        L.02                        L.01
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE  40                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB1806    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR JUN 16, 1981 TO DEC 03, 1981
TEXACO CANADA LTD EDMONTON               DAF INFLUENT COMP.
NW S31 T52 R23 W4M

                               30009L       30305L       25003L       25304L       23009L       42304L       42009L       51003L
                                ZINC         ZINC       MANGANESE    MANGANESE    VANADIUM    MOLYBDENUM   MOLYBDENUM   ANTIMONY
                                TOTAL      EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL        TOTAL

                    SUBM         ZN           ZN           MN           MN           V            MO           MO           SB
                     ID         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)                  6(0)                      6(0)                      3(3)                      3(3)         3(0)
           LOW                   .10                       .034                     L.01                      L.02         .003
          HIGH                   .187                      .059                     L.01                      L.02         .005
       AVERAGE                   .152                      .043                                                            .0040
      STD.DEV.                   .034                      .009                                                            .0010
   PERCNT:10TH
          25TH                   .13                       .036
   MEDIAN 50TH                   .158                      .040                     L.01                      L.02         .004
          75TH                   .179                      .047
          90TH
SECONDARY CODE

                               33005L       33104L       34005L       34102L       13111L       13306L       04102L       04304L
                               ARSENIC      ARSENIC      SELENIUM     SELENIUM     ALUMINUM     ALUMINUM     BERYLLIUM    BERYLLIUM
                               TOTAL       DISSOLVED    TOTAL        DISSOLVED    DISSOLVED    EXTRBLE.     DISSOLVED     EXTRBLE.

                    SUBM         AS           AS           SE           SE           AL           AL           BE           BE
                     ID         MG/L         MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)                  3(0)                      3(0)                      3(0)                      3(3)
           LOW                  .001                      .001                     1200.                      L.005
          HIGH                  .004                      .003                     2100.                      L.005
       AVERAGE                  .0023                     .0017                    1573.33
      STD.DEV.                  .0015                     .0012                     469.18
   PERCNT:10TH
          25TH
   MEDIAN 50TH                  .002                      .001                     1420.                      L.005
          75TH
          90TH
SECONDARY CODE                                            07L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  41                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB1807    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR JUN 15, 1981 TO AUG 17, 1983
TEXACO CANADA LTD EDMONTON                    DAF EFFLUENT GRAB
NW S31 T52 R23 W4M

                       02061F       10301L       10301F       10151L       10101L       02041L       97160S       97163S
                    TEMPERATURE       PH           PH       ALKALINITY   ALKALINITY    SPECIFIC    DISCHARGE    DISCHARGE
                     OF WATER                                 PHENOL       TOTAL       CONDUCT.     INSTANT       DAILY
                                                            PHTHALEIN                                               MEAN
                 SUBM                                         CACO3        CACO3
                  ID    DEG.C       PH UNITS     PH UNITS      MG/L         MG/L        US/CM        M3/S          CFS
SAMPLES(FLAGS)          16(0)        17(0)         4(0)        17(0)        17(0)        17(0)                     16(0)
           LOW           16.0          6.3          6.4           .0          68.         535.                       .58
          HIGH           48.0          7.7          7.2           .0         130.        3030.                      1.40
       AVERAGE           40.9                                     .0          97.9       1325.                      1.0700
      STD.DEV.            7.4                                     .0          18.5        570.                       .2647
  PERCNT:10TH            37.0          6.8                        .0          73.         989.                       .73
          25TH           39.0          7.0          6.60          .0          81.        1054.                       .7950
    MEDIAN 50TH          43.0          7.1          6.80          .0         100.        1151.                      1.1400
          75TH           44.5          7.3          7.00          .0         106.        1413.                      1.3200
          90TH           47.0          7.3                        .0         127.        2330.                      1.34
SECONDARY CODE

                       06201L       06202L       06301L       20103L       20105L       10602L       10604L       97160S
                     BICARBONT.   BICARBONT.   CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS    DISCHARGE
                      (CALCD.)     (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED      TOTAL        TOTAL       INSTANT
                                                                          (CALCD.)     (CALCD.)
                 SUBM   HCO3         HCO3          CO3          CA           CA         CACO3        CACO3
                  ID   MG/L          MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         M3/S
SAMPLES(FLAGS)          17(0)         2(0)        17(0)        17(0)         4(0)         8(0)         9(0)
           LOW            83.         122.           0.          44.          43.7        184.1        167.
          HIGH           158.         158.           0.         127.          72.9        391.4        432.
       AVERAGE           119.         140.           0.          80.6         59.3        280.8        310.1
      STD.DEV.            23.          25.           0.          23.0         12.3         59.8         92.3
  PERCNT:10TH             89.                        0.          49.
          25TH            99.                        0.          64.          50.2        255.4        246.
    MEDIAN 50TH          122.         140.           0.          78.          60.2        270.1        309.
          75TH           129.                        0.          96.          68.3        309.7        367.
          90TH           155.                        0.         118.
SECONDARY CODE                                           11L 10L

                       11103L       12102L       19103L       09107L       17203L       16306L       26009L       26304L
                       SODIUM      MAGNESIUM    POTASSIUM    FLUORIDE     CHLORIDE     SULPHATE       IRON         IRON
                     DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL       EXTRBLE.

                 SUBM    NA           MG            K            F            CL          SO4           FE           FE
                  ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          17(0)        17(0)        17(0)        17(0)        17(0)        17(0)         5(0)        12(1)
           LOW            32.          14.          1.8          .14          21.          95.          .09         L.02
          HIGH           487.          33.          8.4          .46         847.         300.         2.33          .72
       AVERAGE           148.5         23.1         4.51         .279        215.18       224.4         .632         .258*
      STD.DEV.           111.5          5.5         1.99         .089        203.95        57.7         .952         .217*
  PERCNT:10TH             87.          15.          2.8          .16          98.         140.                       .06
          25TH            92.          20.          3.0          .23         126.         190.          .20          .100
    MEDIAN 50TH          117.          22.          3.4          .26         145.         240.          .27          .175
          75TH           159.          26.          5.7          .32         205.         258.          .27          .390
          90TH           361.          32.          7.8          .42         610.         295.                       .56
SECONDARY CODE          11L          11L          11L          06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  42                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB1807    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR JUN 15, 1981 TO AUG 17, 1983
TEXACO CANADA LTD EDMONTON                        DAF EFFLUENT GRAB
NW S31 T52 R23 W4M

                       07105L      07205L      07562L      07021L      07906L      07905L      15421L      97160S
                      NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN   PHOSPHORUS  DISCHARGE
                     DISSOLVED   DISSOLVED   DISSOLVED     TOTAL    PARTICULATE PARTICULATE   TOTAL      INSTANT
                     NO3 & NO2    NITRITE     AMMONIA    KJELDAHL     TOTAL      (CALCD.)
                SUBM     N           N           N           N           N           N          P
                 ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L       MG/L        M3/S
SAMPLES(FLAGS)         17(9)       17(14)      17(0)       17(0)       12(0)                  17(0)
           LOW          .017       L.02         .052        .525        .01                    .065
          HIGH          .52         .45       16.400      16.750       2.10                    .525
       AVERAGE          .077*       .065*      2.481       3.807        .525                   .182
      STD.DEV.          .117*       .100*      3.797       3.660        .532                   .127
  PERCNT:10TH           .025       L.02         .45        1.15         .19                    .08
          25TH          .04         .02         .830       1.750        .285                   .10
   MEDIAN 50TH         L.05        L.05        1.710       3.600        .400                   .140
          75TH         L.05        L.05        2.100       4.000        .550                   .203
          90TH          .15         .05        5.440       6.200        .76                    .440
SECONDARY CODE                                61L         15L                                19L

                       10474L      10407L      10511L      10453L      14101L      97160S      97163S
                      RESIDUE     RESIDUE     RESIDUE     RESIDUE      SILICA    DISCHARGE   DISCHARGE
                       TOTAL    NONFILTRABLE  VOLATILE   FILTRABLE    REACTIVE    INSTANT      DAILY
                                             NONFILTR.                                          MEAN
                SUBM                         (CALCD.)                  SIO2
                 ID    MG/L        MG/L        MG/L        MG/L        MG/L        M3/S         CFS
SAMPLES(FLAGS)         17(0)       17(0)                   12(0)       17(0)                   16(0)
           LOW          422.        10.                     410.        2.6                     .58
          HIGH         1914.        83.0                   1470.        7.8                    1.40
       AVERAGE          922.0       28.7                    799.2       5.47                   1.0700
      STD.DEV.          390.0       23.9                    279.5       1.25                    .2647
  PERCNT:10TH           607.        10.                     590.        4.0                     .73
          25TH          672.        13.                     615.0       4.7                     .7950
   MEDIAN 50TH          830.        18.                     765.0       5.3                    1.1400
          75TH          970.        30.                     885.0       6.4                    1.3200
          90TH         1531.        81.                    1110.        7.0                    1.34
SECONDARY CODE         71L         01L                                 02L

                       00205L      02074L      06537L      06524L      02001L      16101L      10701L      06608L
                       TOTAL     TURBIDITY    PHENOLIC    OIL AND      ODOUR     SULPHIDE    SURFACT.     CYANIDE
                     DISSOLVED                MATERIAL    GREASE     THRESHOLD   DISSOLVED    N-ALKYL
                      SOLIDS                                          NUMBER                 SULPHNTS.
                SUBM                           PHENOL                                 S          LAS         CN
                 ID    MG/L        NTU         MG/L        MG/L         TON        MG/L        MG/L        MG/L
SAMPLES(FLAGS)         17(0)       16(0)       17(0)       17(1)       13(0)       15(4)        7(0)        4(1)
           LOW          304.        1.9         .035        .5           1.         .02         .40        L.002
          HIGH         1938.       38.0         .970      27.3         100.         .56        5.55         .075
       AVERAGE          774.9       6.2         .206       4.847*       27.         .135*      1.644        .0310*
      STD.DEV.          388.8       8.6         .214       6.198*       42.         .142*      1.885        .0335*
  PERCNT:10TH           472.        1.9         .040      L1.0           1.        L.05
          25TH          558.        3.0         .13        2.4           2.        L.05         .46         .0050*
   MEDIAN 50TH          683.        3.8         .175       2.9           4.         .09         .48         .0235
          75TH          827.        5.3         .205       4.6          10.         .18        2.10         .0570
          90TH         1475.        8.0         .321      10.3         100.         .32
SECONDARY CODE                                            21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  43                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                    INDUSTRIAL MONITORING
STATION 20AL05EB1807    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR JUN 15, 1981 TO AUG 17, 1983
TEXACO CANADA LTD EDMONTON                DAF EFFLUENT GRAB
NW S31 T52 R23 W4M

                          08304L      08202L      06107L      06154L      06001L      06051L      06006L      06905L
                          OXYGEN      OXYGEN      CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                            TOTAL    BIOCHEM.   DISSOLVED   DISSOLVED      TOTAL       TOTAL     TOTAL     PARTICULATE
                            COD     DEMAND-BOD   ORGANIC    INORGANIC     ORGANIC    INORGANIC                TOTAL
                   SUBM     02          02          C           C           C           C           C           C
                    ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            17(0)        6(1)       12(0)       12(0)        5(0)                               12(0)
           LOW             21.0        L1.0         4.1        25.         10.8                                 2.13
          HIGH            232.         61.2        31.         39.         52.2                                47.00
       AVERAGE             78.4        28.78*      16.26       32.46       26.12                                8.91
      STD.DEV.             49.6        24.74*       7.04        5.31       16.37                               12.65
   PERCNT:10TH             31.                     10.0        26.5                                             2.16
          25TH             51.1         6.2        11.00       27.50       15.1                                 2.58
   MEDIAN 50TH             63.8        25.10       16.00       32.50       22.0                                 4.00
          75TH             92.7        54.1        19.00       37.50       30.5                                10.16
          90TH            139.                     24.         38.                                             13.61
SECONDARY CODE            01L                                              07L

                          24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                         CHROMIUM    CHROMIUM    CHROMIUM     MERCURY     MERCURY     COBALT      COBALT      SILVER
                        HEXAVALENT    TOTAL      EXTRBLE.     TOTAL       TOTAL       TOTAL      EXTRBLE.    EXTRBLE.

                   SUBM     CR          CR          CR          HG          HG          CO          CO          AG
                    ID     MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            16(13)      17(0)                   17(10)                  17(13)                   5(5)
           LOW             L.001        .015                  L.0001                   L.001                   L.02
          HIGH              .02         .204                    .0010                  L.01                    L.02
       AVERAGE              .005*       .064                    .0002*                  .004*
      STD.DEV.              .006*       .053                    .0002*                  .004*
   PERCNT:10TH             L.001        .02                   L.0001                   L.001
          25TH             L.001        .03                   L.0001                   L.001                   L.02
   MEDIAN 50TH             L.001        .04                   L.0001                    .001                   L.02
          75TH             L.010        .068                    .0002                  L.01                    L.02
          90TH             L.01         .166                    .0006                  L.01
SECONDARY CODE

                          29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                          COPPER      COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM      LEAD        LEAD
                           TOTAL     EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.

                   SUBM     CU          CU          NI          NI          CD          CD          PB          PB
                    ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            16(4)                   17(5)                   17(15)                   8(3)        9(3)
           LOW             L.001                    .005                   L.001                   L.003        .006
          HIGH              .015                    .023                   L.01                     .012        .06
       AVERAGE              .007*                   .012*                   .004*                   .006*       .021*
      STD.DEV.              .004*                   .007*                   .004*                   .003*       .018*
   PERCNT:10TH             L.001                    .006                   L.001
          25TH             L.005                    .006                   L.001                   L.003        .008
   MEDIAN 50TH              .007                    .008                   L.001                    .005       L.02
          75TH              .009                   L.02                    L.01                     .009       L.02
          90TH              .015                   L.02                    L.01
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE  44                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 20AL05EB1807    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR JUN 15, 1981 TO AUG 17, 1983
TEXACO CANADA LTD EDMONTON                DAF EFFLUENT GRAB
NW S31 T52 R23 W4M
                        30009L        30365L       25003L        25304L       23009L        42304L       42009L        51003L
                         ZINC          ZINC       MANGANESE     MANGANESE    VANADIUM     MOLYBDENUM   MOLYBDENUM     ANTIMCNY
                         TOTAL        EXTRBLE.     TOTAL         EXTRBLE.     TOTAL        EXTRBLE.     TOTAL         TOTAL

                SUBM     ZN            ZN           MN            MN           V            MO           MO            SB
                 ID      MG/L          MG/L         MG/L          MG/L         MG/L         MG/L         MG/L          MG/L
SAMPLES(FLAGS)           17(1)                      17(0)                      12(6)                     12(7)          5(1)
           LOW            L.001                       .026                      L.002                     L.001        L.001
          HIGH             .311                       .180                       .01                       .023         .0071
       AVERAGE             .060*                      .071                       .007*                     .013*        .0033*
      STD.DEV.             .077*                      .045                       .003*                     .009*        .0023*
  PERCNT:10TH              .008                       .028                      L.002                     L.001
          25TH             .02                        .035                       .005                      .004         .0024
   MEDIAN 50TH             .028                       .062                       .007                      .016*        .003
          75TH             .051                       .103                      L.010                     L.020         .003
          90TH             .14                        .131                      L.01                      L.02
SECONDARY CODE
                        33005L        33104L       34005L        34102L       13111L        13306L       04102L        04304L
                        ARSENIC       ARSENIC      SELENIUM      SELENIUM     ALUMINUM      ALUMINUM     BERYLLIUM     BERYLLIUM
                        TOTAL        DISSOLVED    TOTAL         DISSOLVED    DISSOLVED     EXTRBLE.     DISSOLVED      EXTRBLE.

                SUBM     AS            AS           SE            SE           AL            AL           BE            BE
                 ID      MG/L          MG/L         MG/L          MG/L         UG/L          MG/L         MG/L          MG/L
SAMPLES(FLAGS)           7(1)                       7(2)                       5(0)          7(0)         5(4)          7(6)
           LOW          L.001                      L.0002                     1300.           .900        L.005         L.001
          HIGH           .006                       .009                      3000.          7.990         .005          .001
       AVERAGE           .0028*                     .0031*                    1660.00        2.220         .005*         .001*
      STD.DEV.           .0017*                     .0032*                     749.63        2.552         .000*         .000*
  PERCNT:10TH
          25TH           .0016                     L.0002                     1300.          1.180        L.005         L.001
   MEDIAN 50TH           .002                       .002                      1330.          1.330        L.005         L.001
          75TH           .004                       .005                      1370.          1.530        L.005         L.001
          90TH
SECONDARY CODE                                     07L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  45                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB1808    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR JUN 16, 1981 TO AUG 16, 1983
TEXACO CANADA LTD EDMONTON                 DAF EFFLUENT COMP.
NW S31 T52 R23 W4M

                          02061F       10301L       10301F       10151L       10101L       02041L       97160S       97163S
                        TEMPERATURE      PH           PH       ALKALINITY   ALKALINITY    SPECIFIC    DISCHARGE    DISCHARGE
                         OF WATER                                 PHENOL       TOTAL      CONDUCT.     INSTANT       DAILY
                                                               PHTHALEIN                                             MEAN
                    SUBM                                          CACO3        CACO3
                     ID    DEG.C       PH UNITS     PH UNITS      MG/L         MG/L         US/CM        M3/S          CFS
SAMPLES(FLAGS)              1(0)         7(0)         2(0)        7(0)         7(0)         7(0)                      7(0)
           LOW              25.5         7.1          7.4           .0          74.        1002.                       .76
          HIGH              25.5         8.3          7.8          7.5         119.        2790.                      1.40
       AVERAGE                                                     1.1          97.7       1343.                      1.0943
      STD.DEV.                                                     2.8          16.1        642.                       .2704
  PERCNT:10TH
          25TH                           7.2                        .0          83.        1080.                       .82
   MEDIAN 50TH                           7.4          7.60          .0          94.        1097.                      1.12
          75TH                           7.6                        .0         111.        1223.                      1.34
          90TH
SECONDARY CODE

                          06201L       06202L       06301L       20103L       20105L       10602L       10604L       97160S
                        BICARBONT.   BICARBONT.   CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS     DISCHARGE
                         (CALCD.)     (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED      TOTAL        TOTAL       INSTANT
                                                                             (CALCD.)    (CALCD.)
                    SUBM   HCO3         HCO3         CO3           CA           CA         CACO3        CACO3
                     ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         M3/S
SAMPLES(FLAGS)              7(0)         1(0)         7(0)         7(0)         3(0)         2(0)         5(0)
           LOW              90.         132.           0.          58.          57.9        264.6        223.
          HIGH             145.         132.           9.         119.          60.6        339.1        417.
       AVERAGE             117.                        1.          79.7         59.1        301.9        297.8
      STD.DEV.              22.                        3.          23.5          1.4         52.7         97.0
  PERCNT:10TH
          25TH              96.                        0.          59.                                   225.
   MEDIAN 50TH             115.                        0.          73.          58.7        301.9        234.
          75TH             135.                        0.         100.                                   390.
          90TH
SECONDARY CODE                                              11L 10L

                          11103L       12102L       19103L       09107L       17203L       16306L       26009L       26304L
                          SODIUM      MAGNESIUM    POTASSIUM    FLUORIDE     CHLORIDE     SULPHATE       IRON         IRON
                        DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL       EXTRBLE.

                    SUBM    NA           MG           K            F            CL           SO4          FE           FE
                     ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)              7(0)         7(0)         7(0)         7(0)         7(0)         7(0)         2(0)         5(1)
           LOW              89.          19.          2.9          .18         121.         140.          .18         L.02
          HIGH             451.          41.          6.9          .34         790.         305.          .31          .19
       AVERAGE             152.9         24.4         4.13         .274        237.57       215.9         .245         .108*
      STD.DEV.             132.2          8.1         1.63         .051        247.41        59.0         .092         .068*
  PERCNT:10TH
          25TH              89.          19.          2.9          .26         125.         160.                       .08
   MEDIAN 50TH             113.          20.          3.1          .28         128.         240.          .245         .09
          75TH             124.          29.          5.7          .32         242.         251.                       .16
          90TH
SECONDARY CODE             11L          11L          11L          06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  46                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 20AL05EB1808    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR JUN 16, 1981 TO AUG 16, 1983
TEXACO CANADA LTD EDMONTON                  DAF EFFLUENT COMP.
NW S31 T52 R23 W4M

                          07105L       07205L       07562L       07021L       07906L       07905L       15421L       97160S
                         NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN    PHOSPHORUS   DISCHARGE
                         DISSOLVED    DISSOLVED    DISSOLVED     TOTAL      PARTICULATE  PARTICULATE    TOTAL       INSTANT
                         NO3 & NO2    NITRITE      AMMONIA      KJELDAHL     TOTAL       (CALCD.)
                 SUBM       N            N            N            N            N            N            P
                  ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L          M3/S
SAMPLES(FLAGS)             7(5)         7(7)         7(0)         7(0)         5(0)                      7(0)
           LOW             .025         L.02          .57          1.0          .28                       .05
          HIGH             L.05         L.05         2.000        5.000         .7                        .250
       AVERAGE             .045*                     1.156        2.696         .528                      .133
      STD.DEV.             .010*                      .589        1.607         .186                      .074
   PERCNT:10TH
          25TH             .04          L.02          .690         1.00         .4                        .065
   MEDIAN 50TH             L.05         L.05          .829         2.275        .56                       .120
          75TH             L.05         L.05         1.700        4.200         .7                        .189
          90TH
SECONDARY CODE                                       61L          15L                                    19L

                          10474L       10407L       10511L       10453L       14101L       97160S       97163S
                         RESIDUE      RESIDUE      RESIDUE      RESIDUE       SILICA     DISCHARGE    DISCHARGE
                          TOTAL    NONFILTRABLE   VOLATILE    FILTRABLE    REACTIVE      INSTANT       DAILY
                                                 NONFILTR.                                              MEAN
                 SUBM                            (CALCD.)                    SIO2
                  ID      MG/L         MG/L         MG/L         MG/L         MG/L         M3/S          CFS
SAMPLES(FLAGS)             7(0)         7(0)                      5(0)         7(0)                      7(0)
           LOW             566.          12.                      550.          4.4                       .76
          HIGH            1782.          17.                     1000.          6.9                      1.40
       AVERAGE             913.3         15.1                     754.0         5.36                     1.0943
      STD.DEV.             419.3          1.9                     210.4          .91                      .2704
   PERCNT:10TH
          25TH             617.          14.0                     600.          4.5                       .82
   MEDIAN 50TH             766.          16.                      660.          5.3                      1.12
          75TH            1014.          17.0                     960.          5.9                      1.34
          90TH
SECONDARY CODE            71L          01L                                    02L

                          00205L       02074L       06537L       06524L       02001L       16101L       10701L       06608L
                          TOTAL      TURBIDITY     PHENOLIC     OIL AND       ODOUR      SULPHIDE     SURFACT.      CYANIDE
                        DISSOLVED                  MATERIAL      GREASE     THRESHOLD    DISSOLVED    N-ALKYL
                          SOLIDS                                             NUMBER                   SULPHNTS.
                 SUBM                               PHENOL                                  S           LAS           CN
                  ID      MG/L          NTU         MG/L         MG/L          TON         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             7(0)         7(0)         7(0)         7(0)         7(0)         1(0)         2(0)
           LOW             512.          1.4          .100          .3           1.          .04          .37
          HIGH            1742.          5.6          .190         4.5         100.          .04         1.75
       AVERAGE             779.3         4.2          .134         3.214        17.                      1.060
      STD.DEV.             438.1         1.4          .040         1.426        37.                       .976
   PERCNT:10TH
          25TH             523.          3.8          .100         2.8           1.
   MEDIAN 50TH             631.          4.5          .110         3.5           2.                      1.060
          75TH             788.          5.0          .185         4.5          10.
          90TH
SECONDARY CODE                                                    21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  47                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB1808    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR JUN 16, 1981 TO AUG 16, 1983
TEXACO CANADA LTD EDMONTON                  DAF EFFLUENT COMP.
NW S31 T52 R23 W4M

                              08304L       08202L       06107L       06154L       06001L       06051L       06006L        06905L
                              OXYGEN       OXYGEN       CARBON       CARBON       CARBON       CARBON       CARBON        CARBON
                               TOTAL      BIOCHEM.     DISSOLVED    DISSOLVED      TOTAL        TOTAL       TOTAL       PARTICULATE
                                COD      DEMAND-BOD     ORGANIC     INORGANIC     ORGANIC     INORGANIC                    TOTAL
                       SUBM     O2            O2          C            C            C            C            C            C
                        ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)                 7(0)         3(0)         5(0)         5(0)         2(0)                                   5(0)
           LOW                 32.          30.1         9.           23.          15.4                                   1.94
          HIGH                 205.         33.8         21.          38.          17.1                                   7.
       AVERAGE                 88.2         31.70        14.44        31.60        16.25                                  4.74
      STD.DEV.                 57.6          1.90         5.32         6.43         1.20                                  2.16
  PERCNT:10TH
          25TH                 40.1                      9.2          29.0                                                3.
   MEDIAN 50TH                 76.0         31.2         15.          30.          16.25                                  5.77
          75TH                 105.1                     18.          38.                                                 6.
          90TH
SECONDARY CODE            01L                                                   07L

                              24101L       24009L       24302L       80015L       80011L       27009L       27302L       47304L
                             CHROMIUM     CHROMIUM     CHROMIUM     MERCURY      MERCURY      COBALT       COBALT       SILVER
                            HEXAVALENT     TOTAL       EXTRBLE.      TOTAL        TOTAL        TOTAL       EXTRBLE.     EXTRBLE.

                       SUBM   CR           CR           CR           HG           HG           CO           CO           AG
                        ID    MG/L         MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)                 7(7)         7(0)                      6(5)         1(1)         7(5)                      2(2)
           LOW                 L.001         .02                      .0001        L.02         L.001                     L.02
          HIGH                 L.01          .111                    L.0001        L.02         L.01                      L.02
       AVERAGE                               .051                     .0001*                     .004*
      STD.DEV.                               .032                     .0000*                     .004*
  PERCNT:10TH
          25TH                 L.001         .024                    L.0001                     L.001
   MEDIAN 50TH                 L.001         .037                    L.0001                      .003                     L.020
          75TH                 L.01          .07                     L.0001                     L.01
          90TH
SECONDARY CODE

                              29009L       29305L       28009L       28302L       48009L       48302L       82009L       82302L
                              COPPER       COPPER       NICKEL       NICKEL       CADMIUM      CADMIUM       LEAD         LEAD
                               TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.

                       SUBM   CU           CU           NI           NI           CD           CD           PB           PB
                        ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)                 7(1)                      7(2)                      7(5)                      4(2)         3(2)
           LOW                 L.005                      .007                     L.001                     L.003        L.02
          HIGH                  .037                     L.02                      L.01                       .005         .020
       AVERAGE                  .017*                     .012*                     .004*                     .004*        .020*
      STD.DEV.                  .013*                     .006*                     .004*                     .001*        .000*
  PERCNT:10TH
          25TH                  .006                      .007                     L.001                     L.003
   MEDIAN 50TH                  .009                      .009                      .002                      .003*       L.02
          75TH                  .032                     L.02                      L.01                       .005
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE  48                             NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                            INDUSTRIAL MONITORING
STATION 20AL05EB1808    LAT. 53D 33M  8S  LONG. 113D 22M 52S   PR 3   UTM 12 342250E 5936100N  FOR JUN 16, 1981 TO AUG 16, 1983
TEXACO CANADA LTD EDMONTON                 DAF EFFLUENT COMP.
NW S31 T52 R23 W4M

                       30009L       30305L       25003L       25304L       23009L       42304L       42009L       51003L
                        ZINC         ZINC       MANGANESE    MANGANESE    VANADIUM    MOLYBDENUM   MOLYBDENUM    ANTIMONY
                        TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL        TOTAL

                 SUBM    ZN           ZN           MN           MN           V            MO           MO           SB
                  ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            7(0)                      7(0)                      4(3)                      4(3)         2(0)
           LOW             .082                      .030                     L.002                     L.001         .001
          HIGH             .217                      .123                     L.01                      L.02          .005
       AVERAGE             .132                      .061                       .007*                     .012*       .0030
      STD.DEV.             .054                      .042                       .004*                     .009*       .0028
  PERCNT:10TH
          25TH             .086                      .035                       .004*                     .005*
   MEDIAN 50TH             .12                       .040                       .008*                     .014*       .0030
          75TH             .192                      .121                     L.010                     L.020
          90TH
SECONDARY CODE

                       33005L       33104L       34005L       34102L       13111L       13306L       04102L       04304L
                       ARSENIC      ARSENIC      SELENIUM     SELENIUM     ALUMINUM     ALUMINUM     BERYLLIUM    BERYLLIUM
                       TOTAL        DISSOLVED    TOTAL        DISSOLVED    DISSOLVED    EXTRBLE.     DISSOLVED    EXTRBLE.

                 SUBM    AS           AS           SE           SE           AL           AL           BE           BE
                  ID     MG/L         MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)           2(0)                      2(0)                      2(0)         2(0)         2(2)         2(2)
           LOW           .003                      .001                     1210.         1.050        L.005        L.001
          HIGH           .008                      .003                     1360.         1.340        L.005        L.001
       AVERAGE           .0055                     .0020                    1285.00       1.195
      STD.DEV.           .0035                     .0014                     106.07        .205
  PERCNT:10TH
          25TH
   MEDIAN 50TH           .0055                     .0020                    1285.00       1.195        L.005        L.001
          75TH
          90TH
SECONDARY CODE                                     07L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  49                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB2000    LAT. 53D 33M 48S  LONG. 113D 22M 33S   PR 3   UTM 12 342650E 5937350N  FOR APR 29, 1980 TO AUG 09, 1984
GULF OIL CANADA LTD EDMONTON               FINAL EFFLUENT GRAB
S5 T53 R23 W4M
                        02061F        10301L        10301F        10151L        10101L        02041L        97160S        97163S
                     TEMPERATURE        PH            PH        ALKALINITY    ALKALINITY     SPECIFIC     DISCHARGE     DISCHARGE
                     OF WATER                                    PHENOL        TOTAL        CONDUCT.      INSTANT        DAILY
                                                               PHTHALEIN                                                 MEAN
               SUBM                                              CACO3         CACO3
                ID    DEG.C          PH UNITS      PH UNITS      MG/L          MG/L          US/CM          M3/S          CFS
SAMPLES(FLAGS)        17(0)          18(0)         3(0)          17(1)         18(0)         18(0)                        19(0)
           LOW          4.0            6.9          8.0             .0           96.          742.                         .085
          HIGH         25.0            8.1          8.6            L.5          175.         2650.                        1.72
       AVERAGE         14.9                                        .0*         138.8         1870.                         .5658
      STD.DEV.          7.0                                        .1*          18.3          464.                         .3743
  PERCNT:10TH           6.0            7.2                         .0          122.          1057.                         .085
          25TH         10.             7.3                         .0          127.          1710.                         .35
   MEDIAN 50TH         16.0            7.40         8.5            .0          137.5         1805.                         .46
          75TH         21.0            7.7                         .0          146.6         2220.                         .68
          90TH         24.0            7.90                        .0          163.0         2420.                        1.19
SECONDARY CODE
                        06201L        06202L        06301L        20103L        20105L        10602L        10604L        97160S
                      BICARBONT.    BICARBONT.    CARBONATE      CALCIUM       CALCIUM       HARDNESS      HARDNESS     DISCHARGE
                       (CALCD.)      (CALCD.)      (CALCD.)      DISSOLVED     DISSOLVED      TOTAL         TOTAL        INSTANT
                                                                              (CALCD.)      (CALCD.)
               SUBM   HCO3           HCO3          CO3            CA            CA           CACO3         CACO3
                ID    MG/L           MG/L          MG/L           MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)        17(1)          5(0)          17(1)          17(0)         5(0)          13(0)         6(0)
           LOW         117.          151.            0.            45.          103.9         170.0         367.
          HIGH         213.          190.           Q1.           166.0         136.8         618.3         572.0
       AVERAGE         168.*         172.            0.*          122.3         121.7         419.2         479.7
      STD.DEV.          22.*          15.            0.*           32.0          11.8         120.0          74.6
  PERCNT:10TH          149.                          0.            85.                        323.4
          25TH         155.          165.            0.           107.          120.6         339.3         447.0
   MEDIAN 50TH         165.          173.            0.           123.0         122.7         423.2         471.5
          75TH         176.          179.            0.           149.0         124.7         489.7         549.0
          90TH         199.                          0.           158.0                       558.3
SECONDARY CODE                                              11L 10L
                        11103L        12102L        19103L        09107L        17203L        16306L        26009L        26304L
                        SODIUM      MAGNESIUM     POTASSIUM      FLUORIDE      CHLORIDE      SULPHATE       IRON          IRON
                      DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED      TOTAL        EXTRBLE.

               SUBM     NA            MG            K             F             CL            SO4           FE            FE
                ID     MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)        18(0)          18(0)         18(0)         18(0)         18(0)         18(0)          2(0)         16(0)
           LOW          29.           14.           2.7          1.030          15.           80.            .74           .06
          HIGH         340.0          49.5         24.0         29.00          522.0         455.0          1.22          5.41
       AVERAGE         205.5          32.8          7.63         6.714         310.11        301.1           .980         1.346
      STD.DEV.          71.7           9.1          5.97         7.014         122.59         92.2           .339         1.585
  PERCNT:10TH           72.           24.           3.7          1.810          72.          215.                          .18
          25TH         197.           26.           4.40         2.10          270.          230.                          .220
   MEDIAN 50TH         215.0          32.0          5.40         3.350         317.50        294.5           .980          .485
          75TH         221.           41.           7.6          9.75          380.          350.                         2.295
          90TH         295.           43.          22.0         15.75          446.0         449.0                        3.64
SECONDARY CODE         11L           11L           11L           06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  50                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                          INDUSTRIAL MONITORING
STATION 20AL05EB2000    LAT. 53D 33M 48S  LONG. 113D 22M 33S   PR 3   UTM 12 342650E 5937350N  FOR APR 29, 1980 TO AUG 09, 1984
GULF OIL CANADA LTD EDMONTON                  FINAL EFFLUENT GRAB
S5 T53 R23 W4M

                         07105L      07205L      07562L      07021L      07906L       07905L      15421L      97160S
                        NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN     NITROGEN   PHOSPHORUS  DISCHARGE
                        DISSOLVED   DISSOLVED   DISSOLVED    TOTAL     PARTICULATE  PARTICULATE   TOTAL      INSTANT
                        NO3 & NO2   NITRITE     AMMONIA     KJELDAHL     TOTAL       (CALCD.)
                  SUBM     N           N           N           N           N            N           P
                   ID     MG/L        MG/L        MG/L        MG/L        MG/L         MG/L        MG/L        M3/S
SAMPLES(FLAGS)           18(13)      18(15)      18(0)       17(0)       13(0)                    17(0)
           LOW            L.02        L.02        .013       1.650        .25                      .108
          HIGH            .370        .25        2.300      11.000       1.10                     1.15
       AVERAGE            .097*       .069*       .721       3.179        .623                     .370
      STD.DEV.            .100*       .060*       .720       2.277        .260                     .341
  PERCNT:10TH             L.02        L.02        .039       1.800        .31                      .130
          25TH            L.05        L.05        .180       2.040        .47                      .150
   MEDIAN 50TH            L.050       L.050       .400       2.250        .660                     .200
          75TH            .10         L.050      1.130       3.350        .7                       .360
          90TH            .27         .20        1.940       6.000       1.07                     1.010
SECONDARY CODE                                   61L         15L                              19L 06L

                         10474L      10407L        10511L      10453L      14101L       97160S      97163S
                         RESIDUE     RESIDUE       RESIDUE     RESIDUE     SILICA      DISCHARGE   DISCHARGE
                          TOTAL    NONFILTRABLE    VOLATILE   FILTRABLE   REACTIVE      INSTANT      DAILY
                                                  NONFILTR.                                          MEAN
                  SUBM                            (CALCD.)                 SIO2
                   ID     MG/L        MG/L          MG/L        MG/L        MG/L         M3/S         CFS
SAMPLES(FLAGS)           16(0)       18(0)          1(0)       14(0)       18(0)                    19(0)
           LOW            560.         11.          10.0        540.         2.0                     .085
          HIGH           2027.        557.          10.0       1930.        14.2                    1.72
       AVERAGE           1367.0        68.7                    1217.1        9.65                    .5658
      STD.DEV.            390.2       126.2                     312.5        3.55                    .3743
  PERCNT:10TH            1052.         17.                     1030.         3.5                     .085
          25TH           1137.5        20.6                    1100.         6.7                     .35
   MEDIAN 50TH           1251.0        25.5                    1150.0       10.00                    .46
          75TH           1665.5        52.                     1380.        12.1                     .68
          90TH           1955.        140.                     1550.        14.0                    1.19
SECONDARY CODE           71L         01L                       51L         02L

                         00205L      02074L      06537L      06524L      02001L       16101L      10701L      06608L
                         TOTAL      TURBIDITY    PHENOLIC    OIL AND     ODOUR       SULPHIDE    SURFACT.     CYANIDE
                        DISSOLVED                MATERIAL    GREASE     THRESHOLD    DISSOLVED   N-ALKYL
                         SOLIDS                                          NUMBER                  SULPHNTS.
                  SUBM                           PHENOL                                  S          LAS          CN
                   ID     MG/L        NTU         MG/L        MG/L        TON          MG/L        MG/L        MG/L
SAMPLES(FLAGS)           17(0)       15(0)       18(0)       17(0)       14(0)        14(4)        9(0)        7(2)
           LOW            367.         6.0        .010         .7          1.         L.02         .26        L.002
          HIGH           1798.0      127.         .290        28.6       1000.          .37        4.75         .510
       AVERAGE           1061.3       32.4        .093         5.482      103.          .144*      2.040        .0914*
      STD.DEV.            330.2       32.4        .075         6.681      262.          .108*      1.779        .1882*
  PERCNT:10TH             595.         7.4        .013         1.0          1.         L.02
          25TH            913.        11.0        .029         2.2          1.         L.020
   MEDIAN 50TH           1038.        21.0        .092         3.2         10.          .145         .44        L.002
          75TH           1231.        40.0        .105         5.6        100.          .22         2.40         .007
          90TH           1525.0       70.0        .200        12.8        100.          .26         2.88         .103
SECONDARY CODE                       73L                     21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  51                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                    INDUSTRIAL MONITORING
STATION 20AL05EB2000    LAT. 53D 33M 48S  LONG. 113D 22M 33S   PR 3   UTM 12 342650E 5937350N  FOR APR 29, 1980 TO AUG 09, 1984
GULF OIL CANADA LTD EDMONTON              FINAL EFFLUENT GRAB
S5 T53 R23 W4M

                         08304L      08202L      06107L      06154L      06001L      06051L      06006L      06905L
                         OXYGEN      OXYGEN      CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                          TOTAL     BIOCHEM.   DISSOLVED   DISSOLVED     TOTAL       TOTAL     TOTAL      PARTICULATE
                           COD     DEMAND-BOD   ORGANIC    INORGANIC    ORGANIC    INORGANIC                 TOTAL
                  SUBM      02          02          C           C           C           C           C           C
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            18(0)        4(0)       14(0)       13(0)        4(0)        2(0)        1(0)       13(0)
           LOW             29.0        30.0         5.3        24.         18.8        27.         95.          1.41
          HIGH            290.0        47.3        50.         47.0        68.         34.0        95.         17.71
       AVERAGE            103.0        40.82       15.64       34.72       46.95       30.50                    6.91
      STD.DEV.             72.2         8.18       13.28        6.17       20.60        4.95                    4.78
   PERCNT:10TH             34.3                     6.         27.0                                             1.95
          25TH             47.7        34.50        9.0        31.0        33.40                                3.92
   MEDIAN 50TH             74.5        43.00       11.50       34.0        50.50       30.50                    5.
          75TH            129.4        47.15       14.         36.70       60.50                                9.69
          90TH            223.0                    41.4        43.0                                            13.00
SECONDARY CODE           01L                     01L                     05L 07L     52L

                         24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                        CHROMIUM    CHROMIUM    CHROMIUM    MERCURY     MERCURY     COBALT      COBALT      SILVER
                       HEXAVALENT    TOTAL      EXTRBLE.     TOTAL       TOTAL       TOTAL      EXTRBLE.    EXTRBLE.

                  SUBM     CR          CR          CR          HG          HG          CO          CO          AG
                   ID      MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            15(9)       17(0)                   17(14)        1(1)       17(4)        1(1)        2(2)
           LOW             L.001        .023                   .0000       L.02        L.001       L.001       L.02
          HIGH              .840       1.34                    .0006       L.02         .011       L.001       L.02
       AVERAGE              .071*       .671                   .0001*                   .005*
      STD.DEV.              .217*       .440                   .0001*                   .003*
   PERCNT:10TH             L.001        .199                  L.0001                   L.001
          25TH             L.001        .300                  L.0001                    .003
   MEDIAN 50TH             L.001        .622                  L.0001                    .004                   L.020
          75TH              .02        1.070                  L.0001                    .008
          90TH              .162       1.32                    .0001                   L.01
SECONDARY CODE

                         29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                         COPPER      COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM      LEAD        LEAD
                          TOTAL     EXTRBLE.      TOTAL     EXTRBLE.      TOTAL     EXTRBLE.     TOTAL      EXTRBLE.

                  SUBM     CU          CU          NI          NI          CD          CD          PB          PB
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            17(0)        1(0)       16(3)        1(0)       16(7)        1(1)        8(3)       10(5)
           LOW              .004        .003       L.001        .002       L.001       L.001       L.003       L.003
          HIGH              .081        .003        .090        .002       L.01        L.001        .012        .038
       AVERAGE              .020                    .020*                   .003*                   .007*       .012*
      STD.DEV.              .020                    .020*                   .003*                   .004*       .012*
   PERCNT:10TH              .006                    .008                   L.001                               L.003
          25TH              .008                    .012                   L.001                   L.003       L.003
   MEDIAN 50TH              .012                    .014                    .002                    .007        .005
          75TH              .024                    .020*                   .004                    .010       L.02
          90TH              .055                    .031                   L.01                                 .031
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE  52                         NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                        INDUSTRIAL MONITORING
STATION 20AL05EB2000    LAT. 53D 33M 48S  LONG. 113D 22M 33S   PR 3   UTM 12 342650E 5937350N  FOR APR 29, 1980 TO AUG 09, 1984
GULF OIL CANADA LTD EDMONTON                FINAL EFFLUENT GRAB
S5 .53 R23 W4M

                        30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                         ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                        TOTAL      EXTRBLE.      TOTAL      EXTRBLE.     TOTAL     EXTRBLE.     TOTAL       TOTAL

                 SUBM     ZN          ZN          MN          MN          V           MO          MO          SB
                  ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           17(0)        1(0)       17(0)        1(0)       14(2)                   13(2)        2(2)
           LOW            .040        .170        .089        .100        .003                    .005       L.001
          HIGH            .685        .170        .501        .100        .040                    .020       L.001
       AVERAGE            .310                    .192                    .011*                   .010*
      STD.DEV.            .207                    .129                    .010*                   .006*
   PERCNT:10TH            .098                    .095                    .004                    .005
          25TH            .156                    .118                    .007                    .006
    MEDIAN 50TH           .218                    .124                    .008                    .007       L.0010
          75TH            .48                     .205                   L.01                     .013
          90TH            .649                    .433                    .022                   L.02
SECONDARY CODE                                                           02L

                        33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                        ARSENIC     ARSENIC    SELENIUM    SELENIUM    ALUMINUM    ALUMINUM    BERYLLIUM   BERYLLIUM
                         TOTAL     DISSOLVED    TOTAL      DISSOLVED   DISSOLVED    EXTRBLE.   DISSOLVED    EXTRBLE.

                 SUBM     AS          AS          SE          SE          AL          AL          BE          BE
                  ID     MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           8(0)         1(0)       8(5)         1(0)        2(0)       12(0)        2(2)       12(12)
           LOW           .0037       .0026      L.0002       .0004       620.          .095      L.005       L.001
          HIGH           .0171       .0026       .008        .0004       710.        12.690      L.005       L.001
       AVERAGE           .0073                   .0014*                  665.00       1.825
      STD.DEV.           .0046                   .0027*                   63.64       3.739
   PERCNT:10TH                                                                         .120                  L.001
          25TH           .0040                  L.0002                                 .188                  L.001
    MEDIAN 50TH          .0059                  L.0002                   665.00        .408      L.005       L.001
          75TH           .0090                   .0012                                 .718                  L.001
          90TH                                                                        5.550                  L.001
SECONDARY CODE                                   07L                                  02L                    02L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  53                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                          INDUSTRIAL MONITORING
STATION 20AL05EB2001    LAT. 53D 33M 48S  LONG. 113D 22M 33S   PR 3   UTM 12 342650E 5937350N  FOR MAR 25, 1981 TO AUG 08, 1984
GULF OIL CANADA LTD EDMONTON                FINAL EFFLUENT COMP.
S5 T53 R23 W4M

                      02061F       10301L       10301F       10151L       10101L       02041L       97160S       97163S
                    TEMPERATURE      PH           PH       ALKALINITY   ALKALINITY    SPECIFIC    DISCHARGE    DISCHARGE
                     OF WATER                                PHENOL        TOTAL      CONDUCT.     INSTANT       DAILY
                                                           PHTHALEIN                                              MEAN
                SUBM                                         CACO3        CACO3
                 ID     DEG.C      PH UNITS     PH UNITS     MG/L         MG/L
SAMPLES(FLAGS)                       5(0)         2(0)        4(0)         5(0)        US/CM        M3/S         CFS
           LOW                       7.3          8.1          .0          122.         5(0)                      5(0)
          HIGH                       7.90         8.2          .0          168.0        1770.                    .2725
       AVERAGE                                                 .0          145.0        2540.                    1.26
      STD.DEV.                                                 .0           17.6        2038.                    .5745
  PERCNT:10TH                                                                            319.                    .3963
          25TH                       7.4
   MEDIAN 50TH                       7.6          8.15         .0          134.         1816.                    .35
          75TH                       7.8                       .0          150.         1902.                    .45
          90TH                                                 .0          151.2        2160.                    .54
SECONDARY CODE

                      06201L       06202L       06301L       20103L       20105L       10602L       10604L       97160S
                    BICARBONT.   BICARBONT.   CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS    DISCHARGE
                     (CALCD.)     (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED      TOTAL        TOTAL       INSTANT
                                                                         (CALCD.)     (CALCD.)
                SUBM   HCO3         HCO3         CO3          CA           CA          CACO3
                 ID   MG/L          MG/L         MG/L         MG/L         MG/L         MG/L         CACO3
SAMPLES(FLAGS)         4(0)         2(0)         4(0)         5(0)         2(0)         3(0)         MG/L        M3/S
           LOW         149.         183.          0.          108.         109.3        376.0        3(0)
          HIGH         205.         184.          0.          174.0        122.7        558.3        434.
       AVERAGE         175.         184.          0.          134.4        116.0        460.5        544.0
      STD.DEV.          24.           1.          0.           29.2          9.5         91.9        475.0
  PERCNT:10TH                                                                                        60.1
          25TH         156.                       0.          111.
   MEDIAN 50TH         173.         184.          0.          123.0        116.0        447.1        447.0
          75TH         194.                       0.          156.
          90TH
SECONDARY CODE                                        11L 10L

                      11103L       12102L       19103L       09107L       17203L       16306L       26009L       26304L
                      SODIUM      MAGNESIUM    POTASSIUM     FLUORIDE     CHLORIDE     SULPHATE      IRON         IRON
                    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED     TOTAL       EXTRBLE.

                SUBM    NA           MG           K            F            CL          SO4          FE           FE
                 ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)         5(0)         5(0)         5(0)         5(0)         5(0)         5(0)         1(0)         4(0)
           LOW         190.          24.          4.1         1.070        292.         284.0         .84          .08
          HIGH         300.0         41.         25.0        10.38         476.0        431.0         .84          .31
       AVERAGE         226.2         33.0         9.24        3.812        355.60       331.2                      .210
      STD.DEV.          42.8          7.4         8.90        3.754         75.64        64.0                      .096
  PERCNT:10TH
          25TH         205.0         27.0         4.50        2.00         300.         285.                      .150
   MEDIAN 50TH         218.          34.0         5.3         2.36         330.00       296.                      .225
          75TH         218.          39.          7.3         3.25         380.         360.                      .270
          90TH
SECONDARY CODE         11L          11L          11L          06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  54                               NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                              INDUSTRIAL MONITORING
STATION 20AL05EB2001     LAT. 53D 33M 48S  LONG. 113D 22M 33S   PR 3   UTM 12 342650E 5937350N  FOR MAR 25, 1981 TO AUG 08, 1984
GULF OIL CANADA LTD EDMONTON                 FINAL EFFLUENT COMP.
S5 T53 R23 W4M

                         07105L       07205L       07562L       07021L       07906L        07905L       15421L        97160S
                        NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN      NITROGEN    PHOSPHORUS    DISCHARGE
                        DISSOLVED    DISSOLVED    DISSOLVED     TOTAL     PARTICULATE   PARTICULATE    TOTAL        INSTANT
                        NO3 & NO2    NITRITE      AMMONIA      KJELDAHL      TOTAL        (CALCD.)
                SUBM        N           N            N            N            N             N            P
                 ID       MG/L        MG/L         MG/L         MG/L         MG/L          MG/L         MG/L          M3/S
SAMPLES(FLAGS)            5(5)        5(5)         5(0)         5(0)         4(0)                       5(0)
           LOW            L.02        L.02         .044         .780         .450                       .145
          HIGH            L.050       L.050        .400         2.7          .68                        1.24
       AVERAGE                                     .145         1.804        .560                       .455
      STD.DEV.                                     .147         .692         .101                       .444
   PERCNT:10TH
          25TH            L.05        L.05         .049         1.700        .480                       .270
   MEDIAN 50TH            L.05        L.05         .110         1.800        .555                       .300
          75TH            L.05        L.05         .12          2.040        .640                       .320
          90TH
SECONDARY CODE                                     61L          15L                                     19L

                         10474L       10407L       10511L       10453L       14101L        97160S       97163S
                         RESIDUE      RESIDUE      RESIDUE      RESIDUE      SILICA       DISCHARGE    DISCHARGE
                          TOTAL     NONFILTRABLE   VOLATILE    FILTRABLE    REACTIVE       INSTANT       DAILY
                                                   NONFILTR.                                             MEAN
                SUBM                               (CALCD.)                   SIO2
                 ID       MG/L        MG/L         MG/L         MG/L          MG/L          M3/S          CFS
SAMPLES(FLAGS)            4(0)        4(0)                      3(0)          5(0)                       5(0)
           LOW            1180.2      20.2                      1160.0        6.70                       .2725
          HIGH            1756.0      50.0                      1260.         14.5                       1.26
       AVERAGE            1357.0      30.5                      1200.0        10.48                      .5745
      STD.DEV.            270.3       13.9                      52.9          2.89                       .3963
   PERCNT:10TH
          25TH            1190.6      20.6                                    9.7                        .35
   MEDIAN 50TH            1246.0      26.0                      1180.         9.7                        .45
          75TH            1523.5      40.5                                    11.8                       .54
          90TH
SECONDARY CODE            71L         01L                                     02L

                         00205L       02074L       06537L       06524L       02001L        16101L       10701L        06608L
                          TOTAL      TURBIDITY    PHENOLIC     OIL AND       ODOUR        SULPHIDE     SURFACT.      CYANIDE
                        DISSOLVED                 MATERIAL     GREASE      THRESHOLD     DISSOLVED     N-ALKYL
                         SOLIDS                                              NUMBER                    SULPHNTS.
                SUBM                              PHENOL                                    S            LAS           CN
                 ID       MG/L        NTU          MG/L         MG/L          TON          MG/L          MG/L          MG/L
SAMPLES(FLAGS)            5(0)        4(0)         4(0)         5(0)          3(0)         1(0)          2(0)
           LOW            1010.       9.0          .009         .8            1.           .33           2.54
          HIGH            1724.0      34.0         .090         7.0           100.         .33           2.75
       AVERAGE            1215.1      16.8         .047         3.180         34.                        2.645
      STD.DEV.            301.0       11.6         .037         2.453         57.                        .148
   PERCNT:10TH
          25TH            1017.       10.5         .017         1.300
   MEDIAN 50TH            1071.4      12.0         .044         3.1           2.                         2.645
          75TH            1253.       23.0         .076         3.7
          90TH
SECONDARY CODE                                                  21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  55                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB2001    LAT. 53D 33M 48S  LONG. 113D 22M 33S   PR 3   UTM 12 342650E 5937350N  FOR MAR 25, 1981 TO AUG 08, 1984
GULF OIL CANADA LTD EDMONTON              FINAL EFFLUENT COMP.
S5 T53 R23 W4M
                       08304L        08202L        06107L        06154L        06001L        06051L        06006L        06905L
                       OXYGEN        OXYGEN        CARBON        CARBON        CARBON        CARBON        CARBON        CARBON
                         TOTAL      BIOCHEM.      DISSOLVED     DISSOLVED       TOTAL         TOTAL      TOTAL         PARTICULATE
                          COD      DEMAND-BOD      ORGANIC      INORGANIC      ORGANIC      INORGANIC                    TOTAL
               SUBM    02                02         C             C               C             C            C           C
                ID     MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          5(0)                         4(0)         4(0)           1(0)                                      4(0)
           LOW            40.3                         1.0        25.            53.0                                       2.95
          HIGH           204.0                        72.         41.0           53.0                                       6.83
       AVERAGE            85.5                        23.10       33.07                                                     4.33
      STD.DEV.            67.1                        32.97        7.02                                                     1.72
   PERCNT:10TH
          25TH            53.0                         3.70       27.50                                                     3.25
   MEDIAN 50TH            60.3                         9.70       33.15                                                     3.78
          75TH            70.0                        42.50       38.65                                                     5.42
          90TH
SECONDARY CODE         01L                                                     07L
                       24101L        24009L        24302L        80015L        80011L        27009L        27302L        47304L
                      CHROMIUM      CHROMIUM      CHROMIUM      MERCURY       MERCURY        COBALT        COBALT        SILVER
                     HEXAVALENT      TOTAL        EXTRBLE.       TOTAL         TOTAL         TOTAL         EXTRBLE.      EXTRBLE.

               SUBM     CR            CR            CR            HG            HG             CO            CO           AG
                ID      MG/L         MG/L          MG/L            MG/L          UG/L         MG/L          MG/L          MG/L
SAMPLES(FLAGS)          3(2)         5(0)                          5(4)                        5(1)                        1(1)
           LOW          L.601           .204                       .0001                        .003                       L.02
          HIGH           .03           1.34                       L.0001                        .010                       L.02
       AVERAGE           .011*          .589                       .0001*                       .006*
      STD.DEV.           .017*          .470                       .0000*                       .004*
   PERCNT:10TH
          25TH                          .242                      L.0001                        .003
   MEDIAN 50TH           L.001          .422                      L.0001                        .005
          75TH                          .738                      L.0001                       L.01
          90TH
SECONDARY CODE
                       29009L        29305L        28009L        28302L        48009L        48302L        82009L        82302L
                       COPPER        COPPER        NICKEL        NICKEL        CADMIUM       CADMIUM        LEAD          LEAD
                        TOTAL        EXTRBLE.      TOTAL         EXTRBLE.       TOTAL        EXTRBLE.      TOTAL         EXTRBLE.

               SUBM     CU            CU            NI             NI           CD             CD            PB           PB
                ID      MG/L         MG/L          MG/L           MG/L          MG/L         MG/L           MG/L          MG/L
SAMPLES(FLAGS)           5(0)                        5(1)                        5(2)                        2(0)          3(1)
           LOW            .012                         .011                      L.001                        .010         L.003
          HIGH            .122                        L.02                       L.01                         .012          .02
       AVERAGE            .041                         .015*                      .004*                       .011          .014*
      STD.DEV.            .046                         .004*                      .004*                       .001          .009*
   PERCNT:10TH
          25TH            .017                         .011                       .002
   MEDIAN 50TH            .019                         .016                       .004                        .011          .018
          75TH            .033                         .018                       .005
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE  56                         NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                        INDUSTRIAL MONITORING
STATION 20AL05EB2001    LAT. 53D 33M 48S  LONG. 113D 22M 33S   PR 3   UTM 12 342650E 5937350N  FOR MAR 25, 1981 TO AUG 08, 1984
GULF OIL CANADA LTD EDMONTON                 FINAL EFFLUENT COMP.
S5 T53 R23 W4M

                           30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                            ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                           TOTAL      EXTRBLE.      TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                   SUBM     ZN          ZN          MN          MN           V          MO          MO          SB
                    ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             5(0)                    5(0)                    4(1)                    4(0)        1(1)
           LOW             .179                    .093                    .007                    .007       L.001
          HIGH            1.270                    .306                    .012                    .02        L.001
       AVERAGE             .495                    .162                    .010*                   .013
      STD.DEV.             .454                    .086                    .002*                   .006
   PERCNT:10TH
          25TH             .188                    .112                    .008                    .008
   MEDIAN 50TH             .328                    .124                    .009*                   .012
          75TH             .51                     .176                    .011*                   .017
          90TH
SECONDARY CODE

                           33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                          ARSENIC     ARSENIC     SELENIUM    SELENIUM    ALUMINUM    ALUMINUM    BERYLLIUM   BERYLLIUM
                           TOTAL     DISSOLVED    TOTAL      DISSOLVED   DISSOLVED    EXTRBLE.   DISSOLVED    EXTRBLE.

                   SUBM     AS          AS          SE          SE          AL          AL          BE          BE
                    ID     MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             3(0)                    3(2)                    1(0)        3(0)        1(0)        3(3)
           LOW             .0036                  L.0002                   620.        .130        .005       L.001
          HIGH             .0068                   .007                    620.        .757        .005       L.001
       AVERAGE             .0048                   .0025*                              .345
      STD.DEV.             .0017                   .0039*                              .357
   PERCNT:10TH
          25TH
   MEDIAN 50TH             .004                   L.0002                               .147                   L.001
          75TH
          90TH
SECONDARY CODE                                     07L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  57                                NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                               INDUSTRIAL MONITORING
STATION 20AL05EB2600    LAT. 53D 34M 26S  LONG. 113D 20M 58S   PR 3   UTM 12 344450E 5938450N  FOR APR 29, 1980 TO FEB 17, 1983
UNIROYAL LTD EDMONTON                          FINAL EFFLUENT GRAB
SE S17 T53 R23 W4M

                         02061F        10301L       10301F       10151L       10101L       02041L       97160S       97163S
                       TEMPERATURE       PH           PH       ALKALINITY   ALKALINITY    SPECIFIC    DISCHARGE    DISCHARGE
                        OF WATER                                 PHENOL        TOTAL      CONDUCT.     INSTANT       DAILY
                 SUBM                                          PHTHALEIN                                             MEAN
                  ID      DEG.C        PH UNITS     PH UNITS     CACO3         CACO3
SAMPLES(FLAGS)             6(0)          6(0)         1(0)       MG/L          MG/L        US/CM        M3/S         CFS
           LOW             26.0          7.0          8.4        6(1)          6(0)         6(0)                     5(0)
          HIGH             71.0          8.6          8.4          .0          65.          399.                     .027
       AVERAGE             57.1                                  5.           139.         1294.                     .03
      STD.DEV.             16.2                                  2.0*          98.0         707.                     .0288
  PERCNT:10TH                                                    2.3*          26.0         325.                     .0016
          25TH             56.5          7.5
    MEDIAN 50TH            61.5          8.05                     .0           82.          507.                     .027
          75TH             66.0          8.6                     1.7           93.5         599.                     .03
          90TH                                                   L4.          115.0         843.                     .03
SECONDARY CODE

                         06201L        06202L       06301L       20103L       20105L       10602L       10604L       97160S
                       BICARBONT.    BICARBONT.    CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS    DISCHARGE
                         (CALCD.)     (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED      TOTAL        TOTAL      INSTANT
                                                                            (CALCD.)     (CALCD.)
                 SUBM     HCO3          HCO3         CO3           CA           CA         CACO3        CACO3
                  ID    MG/L            MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            6(1)                       6(1)         4(0)         2(0)         3(0)         3(0)         M3/S
           LOW              71.                        0.          42.0         36.6        165.0        141.
          HIGH             157.                        6.          91.         111.8        334.3        432.
       AVERAGE             114.*                       2.*         56.5         74.2        230.0        247.7
      STD.DEV.              31.*                       3.*         23.3         53.2         91.2        160.3
  PERCNT:10TH
          25TH             100.                        0.          42.5
    MEDIAN 50TH            109.                        2.          46.5         74.2        190.7       .  2.0
          75TH             140.                       Q5.          70.5
          90TH
SECONDARY CODE                                                11L 10L

                         11103L        12102L       19103L       09107L       17203L       16306L       26009L       26304L
                         SODIUM      MAGNESIUM    POTASSIUM     FLUORIDE     CHLORIDE     SULPHATE      IRON         IRON
                        DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL       EXTRBLE.
                 SUBM      NA            MG           K            F            CL          SO4
                  ID      MG/            MG/L         MG/L         MG/L         MG/L         MG/L          FE          FE
SAMPLES(FLAGS)            6              6(0)         6(0)         6(1)         6(0)         6(0)        MG/L         MG/L
           LOW             19.           12.          1.5          L.10         54.          25.          1(0)        5(0)
          HIGH             87.           37.         19.0           .49        292.         170.          3.84         .89
       AVERAGE             38.5          20.2          5.20         .215*      120.00         68.0        3.84        3.79
      STD.DEV.             24.9           9.6          6.84         .143*       86.53         54.2                    1.638
  PERCNT:10TH                                                                                                         1.229
          25TH             25.           14.           1.8          .11         78.          25.
    MEDIAN 50TH            29.5          16.0          2.30         .190        91.00        56.0                     .97
          75TH             41.           26.           4.3          .21        114.          76.                      1.01
          90TH                                                                                                        1.53
SECONDARY CODE           11L           11L           11L          06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  58                              NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                              INDUSTRIAL MONITORING
STATION 20AL05EB2600     LAT. 53D 34M 26S  LONG. 113D 20M 58S   PR 3   UTM 12 344450E 5938450N  FOR APR 29, 1980 TO FEB 17, 1983
UNIROYAL LTD EDMONTON                          FINAL EFFLUENT GRAB
SE S17 T53 R23 W4M

                       07105L      07205L      07562L      07021L      07906L      07905L      15421L      97160S
                      NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN   PHOSPHORUS   DISCHARGE
                      DISSOLVED   DISSOLVED   DISSOLVED    TOTAL     PARTICULATE PARTICULATE   TOTAL       INSTANT
                      NO3 & NO2   NITRITE     AMMONIA     KJELDAHL     TOTAL      (CALCD.)
               SUBM       N           N           N           N           N           N           P
                ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)           6(3)        6(5)        6(0)        6(0)        3(0)                    6(0)
           LOW           L.05        .023        .283       1.880         .38                    .820
          HIGH            .30        L.05       5.550       9.100         .50                   4.500
       AVERAGE           .132*       .045*      2.093       4.077        .450                   2.031
      STD.DEV.           .123*       .011*      1.943       2.592        .062                   1.412
  PERCNT:10TH
          25TH           L.05        L.05        .750       2.630                                .887
   MEDIAN 50TH           .055*      L.050       1.518       3.375         .47                   1.725
          75TH           .280        L.05        2.94         4.1                               2.530
          90TH
SECONDARY CODE                                   61L         15L                                 19L

                       10474L      10407L      10511L      10453L      14101L      97160S      97163S
                       RESIDUE     RESIDUE     RESIDUE     RESIDUE     SILICA     DISCHARGE   DISCHARGE
                        TOTAL    NONFILTRABLE  VOLATILE   FILTRABLE   REACTIVE     INSTANT      DAILY
                                              NONFILTR.                                          MEAN
               SUBM                           (CALCD.)                 SIO2
                ID      MG/L        MG/L        MG/L        MG/L        MG/L        M3/S         CFS
SAMPLES(FLAGS)           6(0)        6(0)                    4(0)        6(0)                    5(0)
           LOW          398.0         17.                    410.         2.7                    .027
          HIGH          1236.         86.                   1140.         9.2                     .03
       AVERAGE          639.5        46.2                   697.5        4.75                   .0288
      STD.DEV.          323.2        27.8                   321.7        2.64                   .0016
  PERCNT:10TH
          25TH           427.         22.                   465.0         3.0                    .027
   MEDIAN 50TH          498.5        43.5                   620.0        3.40                     .03
          75TH           779.         65.                   930.0         6.8                     .03
          90TH
SECONDARY CODE           71L         01L                                 02L

                       00205L      02074L      06537L      06524L      02001L      16101L      10701L      06608L
                        TOTAL     TURBIDITY   PHENOLIC     OIL AND      ODOUR     SULPHIDE    SURFACT.     CYANIDE
                      DISSOLVED               MATERIAL     GREASE    THRESHOLD   DISSOLVED   N-ALKYL.
                       SOLIDS                                          NUMBER                SULPHNTS.
               SUBM                           PHENOL                                  S          LAS          CN
                ID      MG/L         NTU        MG/L        MG/L         TON        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           6(0)        5(0)        5(0)        5(0)                                6(0)        1(0)
           LOW           209.         5.5        .115          .6                                 .12        .003
          HIGH           666.        26.0        .975         9.0                                3.24        .003
       AVERAGE          381.0        15.3        .418       3.280                               1.132
      STD.DEV.          171.0         7.5        .333       3.339                               1.293
  PERCNT:10TH
          25TH           254.        13.0        .260         1.4                                 .15
   MEDIAN 50TH          331.5        14.0        .291         2.2                                .540
          75TH           494.        18.0        .450         3.2                                2.20
          90TH
SECONDARY CODE                       73L                     21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  59                               NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                              INDUSTRIAL MONITORING
STATION 20AL05EB2600    LAT. 53D 34M 26S  LONG. 113D 20M 58S   PR 3   UTM 12 344450E 5938450N  FOR APR 29, 1980 TO FEB 17, 1983
UNIROYAL LTD EDMONTON                          FINAL EFFLUENT GRAB
SE S17 T53 R23 W4M

                          08304L      08202L       06107L      06154L      06001L      06051L      06006L      06905L
                          OXYGEN      OXYGEN       CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                           TOTAL      BIOCHEM.     DISSOLVED   DISSOLVED   TOTAL       TOTAL      TOTAL        PARTICULATE
                            COD       DEMAND-BOD   ORGANIC     INORGANIC   ORGANIC     INORGANIC                 TOTAL
                   SUBM    O2            O2        C           C           C           C           C           C
                    ID    MG/L        MG/L         MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             6(0)                      4(0)        4(0)        2(0)        1(0)        1(0)        3(0)
           LOW             36.5                      3.5        17.0        10.          9.         19.           2.54
          HIGH            136.7                    116.         35.         35.5         9.         19.           4.71
       AVERAGE             63.2                     36.05       23.60       22.75        9.         19.           3.42
      STD.DEV.             37.0                     53.60        7.91       18.03                                 1.14
   PERCNT:10TH
          25TH             41.5                      5.60       18.50
   MEDIAN 50TH             52.5                     12.35       21.20       22.75                                 3.00
          75TH             59.4                     66.50       28.70
          90TH
SECONDARY CODE        01L                                                 07L

                         24101L       24009L      24302L       80015L      80011L      27009L      27302L      47304L
                        CHROMIUM     CHROMIUM    CHROMIUM     MERCURY     MERCURY     COBALT      COBALT      SILVER
                        HEXAVALENT    TOTAL       EXTRBLE.    TOTAL       TOTAL       TOTAL       EXTRBLE.    EXTRBLE.

                   SUBM   CR          CR          CR          HG          HG          CO          CO          AG
                    ID    MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            3(2)        5(0)                    5(3)                    6(3)                      1(1)
           LOW            L.001        .006                   L.0001                  L.001                     L.02
          HIGH             .22         .066                    .0018                  L.01                      L.02
       AVERAGE             .074*       .034                    .0005*                  .003*
      STD.DEV.             .126*       .028                    .0007*                  .003*
   PERCNT:10TH
          25TH                         .011                   L.0001                  L.001
   MEDIAN 50TH            L.001        .026                   L.0001                   .003
          75TH                         .059                    .0003                   .004
          90TH
SECONDARY CODE

                         29009L       29305L      28009L      28302L      48009L      48302L      82009L      82302L
                         COPPER       COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM     LEAD        LEAD
                          TOTAL       EXTRBLE.    TOTAL       EXTRBLE.    TOTAL       EXTRBLE.    TOTAL       EXTRBLE.

                   SUBM   CU          CU          NI          NI          CD          CD          PB          PB
                    ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            6(0)                    6(0)                    5(4)                    3(0)        3(2)
           LOW             .020                    .007                   L.001                    .006       L.003
          HIGH             .077                    .028                   L.01                     .025       L.02
       AVERAGE             .051                    .016                    .003*                   .013        .009*
      STD.DEV.             .022                    .008                    .004*                   .010        .009*
   PERCNT:10TH
          25TH             .031                    .007                   L.001
   MEDIAN 50TH             .053                    .017                   L.001                    .008        .005
          75TH             .072                    .021                    .002
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE  60                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB2600    LAT. 53D 34M 26S  LONG. 113D 20M 58S   PR 3   UTM 12 344450E 5938450N  FOR APR 29, 1980 TO FEB 17, 1983
UNIROYAL LTD EDMONTON                      FINAL EFFLUENT GRAB
SE S17 T53 R23 W4M

                           30009L        30305L        25003L        25304L        23009L        42304L        42009L        51003L
                            ZINC          ZINC       MANGANESE     MANGANESE     VANADIUM     MOLYBDENUM    MOLYBDENUM     ANTIMONY
                           TOTAL       EXTRBLE.        TOTAL       EXTRBLE.        TOTAL       EXTRBLE.        TOTAL         TOTAL

                   SUBM     ZN            ZN            MN            MN             V            MO            MO            SB
                    ID     MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)             6(0)                        6(0)                        2(0)                        4(4)
           LOW              .025                        .129                        .003                       L.001
          HIGH              .997                       1.620                        .003                       L.02
       AVERAGE              .443                        .514                        .003
      STD.DEV.              .374                        .554                        .000
  PERCNT:10TH
          25TH              .062                        .242                                                   L.001
   MEDIAN 50TH              .431                        .322                        .003                       L.001
          75TH              .71                         .451                                                   L.010
          90TH
SECONDARY CODE

                           33005L        33104L        34005L        34102L        13111L        13306L        04102L        04304L
                           ARSENIC       ARSENIC       SELENIUM      SELENIUM      ALUMINUM      ALUMINUM      BERYLLIUM     BERYLLIUM
                           TOTAL        DISSOLVED     TOTAL         DISSOLVED     DISSOLVED     EXTRBLE.      DISSOLVED      EXTRBLE.

                   SUBM     AS            AS            SE            SE            AL            AL            BE            BE
                    ID     MG/L          MG/L          MG/L          MG/L          UG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)             1(0)                        1(0)                                      3(0)                        3(3)
           LOW             .0045                       .0003                                      .104                       L.001
          HIGH             .0045                       .0003                                      .661                       L.001
       AVERAGE                                                                                    .382
      STD.DEV.                                                                                    .279
  PERCNT:10TH
          25TH
   MEDIAN 50TH                                                                                    .382                       L.001
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  61
                                                  NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                    INDUSTRIAL MONITORING
STATION 20AL05EB2700     LAT. 53D 34M 19S  LONG. 113D 21M  3S    PR 3    UTM 12 344350E 5938250N  FOR APR 28, 1980 TO AUG 09, 1984
FIBERGLASS CANADA LTD EDMONTON             FINAL EFFLUENT GRAB
SE S17 T53 R23 W4M

                        02061F       10301L       10301F       10151L       10101L       02041L       97160S       97163S
                      TEMPERATURE      PH           PH       ALKALINITY   ALKALINITY    SPECIFIC    DISCHARGE    DISCHARGE
                       OF WATER                                PHENOL       TOTAL       CONDUCT.     INSTANT       DAILY
                                                             PHTHALEIN                                              MEAN
                SUBM                                           CACO3        CACO3
                 ID     DEG.C       PH UNITS     PH UNITS      MG/L         MG/L
SAMPLES(FLAGS)          12(0)        14(0)        1(0)        12(1)        14(0)        US/CM         M3/S         CFS
           LOW           13.0         7.04         8.6           .0         53.1       14(0)                     13(0)
          HIGH           45.0         8.4          8.6        L4.2        151.          275.                        .22
       AVERAGE           28.3                                    .4*      102.2         474.                        .62
      STD.DEV.            7.6                                   1.2*       30.7         362.                        .3595
   PERCNT:10TH           23.0         7.6                        .0        60.0          77.                        .1083
          25TH           24.5         7.8                        .0        86.          277.                        .22
   MEDIAN 50TH           28.5         7.95                       .0        95.8         294.                        .30
          75TH           32.0         8.20                       .0       137.          326.                        .37
          90TH           34.          8.3                        .0       145.          441.                        .41
SECONDARY CODE                                                                          470.                        .45

                        06201L       06202L       06301L       20103L       20105L       10602L       10604L       97160S
                      BICARBONT.   BICARBONT.   CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS     DISCHARGE
                       (CALCD.)     (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED      TOTAL        TOTAL       INSTANT
                                                                          (CALCD.)     (CALCD.)
                SUBM    HCO3         HCO3         CO3          CA           CA          CACO3        CACO3
                 ID   MG/L           MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          12(1)        5(0)         12(1)        13(0)        2(0)         10(0)        5(0)          M3/S
           LOW           65.          97.           0.          25.          27.8        119.3        119.0
          HIGH          184.         184.          Q5.          65.          32.3        208.8        183.9
       AVERAGE          128.*        124.           0.*         42.5         30.0        163.7        136.9
      STD.DEV.           40.*         35.           1.*         13.5          3.1         32.5         26.7
   PERCNT:10TH           73.                        0.          28.0                     124.7
          25TH          104.         105.           0.          31.                      130.9        124.
   MEDIAN 50TH          124.         111.           0.          47                       166.8        126.
          75TH          169.         124.           0.          49.          30.0        191.1        131.6
          90TH          177.                        0.          65.                      206.1
SECONDARY CODE                                          11L 10L

                        11103L       12102L       19103L       09107L       17203L       16306L       26009L       26304L
                        SODIUM      MAGNESIUM    POTASSIUM    FLUORIDE     CHLORIDE     SULPHATE       IRON         IRON
                       DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL       EXTRBLE.
                SUBM     NA           MG           K            F            CL           SO4          FE           FE
                 ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          14(0)        14(0)        14(0)        14(0)        14(0)        14(0)        3(0)         11(0)
           LOW            2.0          7.           .9          .13          4.          45.          .13          .14
          HIGH           15.          21.         22.0         1.20         35.0        110.         1.95         1.87
       AVERAGE            8.5         12.9         2.95         .878         9.61         69.0         .923         .706
      STD.DEV.            3.3          3.2         5.50         .297         8.24         23.1         .932         .524
   PERCNT:10TH            6.          10.          1.00          .32          5.          46.                       .19
          25TH            6.6         11.          1.10          .88          5.          52.0                      .25
   MEDIAN 50TH            8.0         12.9         1.45         .935         6.00         60.5         .69          .590
          75TH            9.          14.          2.0          1.03         13.          80.                      1.060
          90TH           13.          15.3         2.1          1.18         15.         108.7                      1.21
SECONDARY CODE          11L          11L          11L          06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  62                         NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                        INDUSTRIAL MONITORING
STATION 20AL05EB2700    LAT. 53D 34M 19S  LONG. 113D 21M  3S   PR 3   UTM 12 344350E 5938250N  FOR APR 28, 1980 TO AUG 09, 1984
FIBERGLASS CANADA LTD EDMONTON            FINAL EFFLUENT GRAB
SE S17 T53 R23 W4M

                         07105L      07205L      07562L      07021L      07906L      07905L      15421L      97160S
                        NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN   PHOSPHORUS  DISCHARGE
                        DISSOLVED   DISSOLVED   DISSOLVED    TOTAL     PARTICULATE PARTICULATE   TOTAL       INSTANT
                        NO3 & NO2   NITRITE     AMMONIA     KJELDAHL     TOTAL      (CALCD.)
                SUBM       N           N           N           N           N           N           P
                 ID       MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)           14(0)       14(5)       14(0)       13(0)        9(0)                    13(1)
           LOW             .25        L.02         .698       1.025         .03                    L.02
          HIGH            2.05        5.00        2.24        8.880         .32                     .430
       AVERAGE             .868        .794*      1.417       3.078         .164                    .144*
      STD.DEV.             .542       1.482*       .527       2.067         .112                    .127*
  PERCNT:10TH              .40        L.05         .850       1.400                                 .02
          25TH             .450       L.050        .920       1.550         .07                     .075
    MEDIAN 50TH            .620        .105       1.420       2.9           .12                     .094
          75TH            1.4          .55        1.920       3.100         .26                     .17
          90TH            1.5         3.3         2.100       5.340                                 .380
SECONDARY CODE                                    61L         15L                                  19L

                         10474L      10407L      10511L      10453L      14101L      97160S      97163S
                         RESIDUE     RESIDUE     RESIDUE     RESIDUE     SILICA     DISCHARGE   DISCHARGE
                          TOTAL    NONFILTRABLE  VOLATILE   FILTRABLE   REACTIVE     INSTANT      DAILY
                                                NONFILTR.                                         MEAN
                SUBM                            (CALCD.)                  SIO2
                 ID       MG/L        MG/L        MG/L        MG/L        MG/L        M3/S        CFS
SAMPLES(FLAGS)           13(0)       14(0)                   10(0)       14(0)                   13(0)
           LOW            220.         13.                    180.         3.50                   .22
          HIGH            537.        247.                    390.         7.9                    .62
       AVERAGE            377.2        69.6                   305.6        5.56                   .3595
      STD.DEV.            108.0        70.0                    67.5        1.47                   .1083
  PERCNT:10TH             222.         14.                    193.0        3.8                    .22
          25TH            287.         22.                    280.0        4.1                    .30
    MEDIAN 50TH           377.         49.5                   330.0        5.75                   .37
          75TH            455.         97.                    350.         6.7                    .41
          90TH            536.        187.8                   370.0        7.3                    .45
SECONDARY CODE           71L         01L                     51L         02L

                         00205L      02074L      06537L      06524L      02001L      16101L      10701L      06608L
                          TOTAL     TURBIDITY    PHENOLIC    OIL AND      ODOUR     SULPHIDE    SURFACT.     CYANIDE
                        DISSOLVED                MATERIAL    GREASE     THRESHOLD   DISSOLVED    N-ALKYL
                         SOLIDS                                          NUMBER                 SULFHNTS.
                SUBM                             PHENOL                                  S         LAS          CN
                 ID       MG/L        NTU         MG/L        MG/L         TON        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           13(0)       13(0)       14(1)       14(0)        1(0)                   12(0)        3(2)
           LOW            156.          2.0       L.002         .37         1.                      .09       L.002
          HIGH            291.         35.0        .328       16.0          1.                      .70        .007
       AVERAGE            212.7        11.2        .061*       4.019                                .258       .0037*
      STD.DEV.             43.7         9.6        .109*       3.904                                .169       .0029*
  PERCNT:10TH             159.9         2.4        .004         .5                                  .11
          25TH            177.          3.0        .005        2.4                                  .150
    MEDIAN 50TH           206.          9.0        .010        2.850                                .200      L.0020
          75TH            253.         15.0        .054        5.                                   .335
          90TH            260.         20.0        .295        6.2                                  .38
SECONDARY CODE                       73L                     21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  63                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB2700    LAT. 53D 34M 19S  LONG. 113D 21M  3S   PR 3   UTM 12 344350E 5938250N  FOR APR 28, 1980 TO AUG 09, 1984
FIBERGLASS CANADA LTD EDMONTON          FINAL EFFLUENT GRAB
SE S17 T53 R23 W4M

                            08304L        08202L        06107L        06154L        06001L        06051L        06006L        06905L
                            OXYGEN        OXYGEN        CARBON        CARBON        CARBON        CARBON        CARBON        CARBON
                             TOTAL      BIOCHEM.     DISSOLVED     DISSOLVED         TOTAL         TOTAL         TOTAL   PARTICULATE
                               COD    DEMAND-BOD       ORGANIC     INORGANIC       ORGANIC     INORGANIC                       TOTAL
               SUBM             02            02             C             C             C             C             C             C
                ID            MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)               14(2)                        9(0)          9(0)          4(0)          1(0)          1(0)          9(0)
           LOW                 L5.                        1.30          21.0           4.5           13.           26.           .61
          HIGH                56.3                        18.3        183.00          15.8           13.           26.          4.90
       AVERAGE               20.2*                        6.73         48.92         10.72                                      2.46
      STD.DEV.               14.4*                        6.42         50.76          4.86                                      1.34
   PERCNT:10TH                L5.0
          25TH                 10.                         2.3           28.          7.05                                      1.71
   MEDIAN 50TH                17.0                         4.2          34.3         11.30                                      2.26
          75TH                25.0                          7.           39.         14.40                                      2.80
          90TH                42.0
SECONDARY CODE                 01L                                                     07L

                            24101L        24009L        24302L        80015L        80011L        27009L        27302L        47304L
                          CHROMIUM      CHROMIUM      CHROMIUM       MERCURY       MERCURY        COBALT        COBALT        SILVER
                        HEXAVALENT         TOTAL      EXTRBLE.         TOTAL         TOTAL         TOTAL      EXTRBLE.      EXTRBLE.

               SUBM             CR            CR            CR            HG            HG            CO            CO            AG
                ID            MG/L          MG/L          MG/L          MG/L          UG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)              12(11)         13(2)                      13(11)          1(1)         13(9)                        3(3)
           LOW               L.001          .007                       .0001          L.02         L.001                        L.02
          HIGH                 .26           .28                       .0003          L.02           .03                        L.02
       AVERAGE               .024*         .032*                      .0001*                       .006*
      STD.DEV.               .074*         .075*                      .0001*                       .008*
   PERCNT:10TH               L.001          .007                      L.0001                       L.001
          25TH               L.001          .008                      L.0001                       L.001
   MEDIAN 50TH               L.001          .009                      L.0001                       L.001                        L.02
          75TH               L.005          .011                      L.0001                        .009
          90TH                L.01          .024                      L.0001                        L.01
SECONDARY CODE

                            29009L        29305L        28009L        28302L        48009L        48302L        82009L        82302L
                            COPPER        COPPER        NICKEL        NICKEL       CADMIUM       CADMIUM          LEAD          LEAD
                             TOTAL      EXTRBLE.         TOTAL      EXTRBLE.         TOTAL      EXTRBLE.         TOTAL      EXTRBLE.

               SUBM             CU            CU            NI            NI            CD            CD            PB            PB
                ID            MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)               13(0)                       13(3)                      13(12)                        5(3)          8(5)
           LOW                .006                       L.001                       L.001                       L.003         L.003
          HIGH                .024                        .052                        L.01                        .008          .020
       AVERAGE                .013                       .020*                       .003*                       .004*         .014*
      STD.DEV.                .006                       .015*                       .004*                       .002*         .008*
   PERCNT:10TH                .007                        .007                       L.001
          25TH                .008                        .012                       L.001                       L.003         .006*
   MEDIAN 50TH                .012                        .017                       L.001                       L.003         .017*
          75TH                .014                        .024                        .005                        .005         L.020
          90TH                .024                         .05                        L.01
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE  64                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB2700    LAT. 53D 34M 19S  LONG. 113D 21M  3S   PR 3   UTM 12 344350E 5938250N  FOR APR 28, 1980 TO AUG 09, 1984
FIBERGLASS CANADA LTD EDMONTON              FINAL EFFLUENT GRAB
SE S17 T53 R23 W4M

                          30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                           ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                          TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                   SUBM    ZN          ZN          MN          MN          V           MO          MO          SB
                    ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            13(0)                   12(0)                   10(7)                   11(10)       2(0)
           LOW              .018                    .021                   L.002                   L.001        .008
          HIGH              .200                    .168                   L.01                    L.02         .014
       AVERAGE              .049                    .059                     .005*                   .007*      .0110
      STD.DEV.              .050                    .042                     .004*                   .009*      .0042
   PERCNT:10TH              .019                    .027                   L.002                   L.001
          25TH              .028                    .030                   L.002                   L.001
    MEDIAN 50TH             .032                    .047                     .002*                 L.001        .0110
          75TH              .037                    .073                     .009                  L.02
          90TH              .094                    .098                   L.010                   L.02
SECONDARY CODE

                          33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                          ARSENIC     ARSENIC    SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                          TOTAL      DISSOLVED   TOTAL       DISSOLVED   DISSOLVED   EXTRBLE.   DISSOLVED    EXTRBLE.

                   SUBM    AS          AS          SE          SE          AL          AL          BE          BE
                    ID    MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            6(0)                    6(4)                     2(0)       8(0)        2(2)        8(8)
           LOW            .0003                  L.0002                   550.          .257      L.005       L.001
          HIGH            .021                    .011                    610.          .640      L.005       L.001
       AVERAGE            .0061                   .0031*                  580.00        .458
      STD.DEV.            .0088                   .0047*                   42.43        .155
   PERCNT:10TH
          25TH            .0005                  L.0002                                 .322                  L.001
    MEDIAN 50TH           .0009                  L.0002                   580.00        .451      L.005       L.001
          75TH            .013                    .007                                  .610                  L.001
          90TH
SECONDARY CODE                                     07L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  65                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB2701    LAT. 53D 34M 19S  LONG. 113D 21M  3S   PR 3   UTM 12 344350E 5938250N  FOR JUL 28, 1981 TO AUG 08, 1984
FIBERGLASS CANADA LTD EDMONTON           FINAL EFFLUENT COMP.
SE S17 T53 R23 W4M

                        02061F         10301L         10301F         10151L         10101L         02041L         97160S         97163S
                      TEMPERATURE        PH             PH         ALKALINITY     ALKALINITY      SPECIFIC      DISCHARGE      DISCHARGE
                      OF WATER                                       PHENOL          TOTAL        CONDUCT.       INSTANT         DAILY
                SUBM                                               PHTHALEIN                                                    MEAN
                 ID                                                  CACO3          CACO3
                        DEG.C          PH UNITS       PH UNITS       MG/L           MG/L           US/CM          M3/S           CFS
SAMPLES(FLAGS)                         4(0)                          3(0)           4(0)           4(0)                          4(0)
           LOW                          7.13                           .0            71.7          307.                           .22
          HIGH                          8.0                           3.3           169.           577.                           .45
       AVERAGE                                                        1.1           105.6          449.                           .3650
      STD.DEV.                                                        1.9            44.1          114.                           .1008
  PERCNT:10TH
          25TH                          7.46                                         75.7          365.                           .3000
   MEDIAN 50TH                          7.90                           .0            90.9          456.                           .3950
          75TH                          8.00                                        135.5          533.                           .4300
          90TH
SECONDARY CODE

                        06201L         06202L         06301L         20103L         20105L         10602L         10604L         97160S
                      BICARBONT.     BICARBONT.     CARBONATE      CALCIUM        CALCIUM        HARDNESS       HARDNESS       DISCHARGE
                       (CALCD.)       (CALCD.)       (CALCD.)      DISSOLVED      DISSOLVED       TOTAL          TOTAL          INSTANT
                                                                                  (CALCD.)       (CALCD.)
                SUBM    HCO3           HCO3           CO3            CA             CA            CACO3          CACO3
                 ID    MG/L            MG/L           MG/L           MG/L           MG/L           MG/L           MG/L           M3/S
SAMPLES(FLAGS)          3(0)           2(0)           3(0)           4(0)           1(0)           3(0)           2(0)
           LOW           79.            97.             0.           32.0           31.7          137.5          131.9
          HIGH          206.           206.             4.           68.            31.7          240.4          137.0
       AVERAGE          137.           152.             1.           48.5                         193.6          134.4
      STD.DEV.           64.            77.             2.           18.2                          52.0            3.6
  PERCNT:10TH
          25TH                                                       33.1
   MEDIAN 50TH          124.           152.             0.           47.1                         202.7          134.4
          75TH                                                       64.0
          90TH
SECONDARY CODE                                                11L 10L

                        11103L         12102L         19103L         09107L         17203L         16306L         26009L         26304L
                        SODIUM         MAGNESIUM      POTASSIUM      FLUORIDE       CHLORIDE       SULPHATE        IRON           IRON
                       DISSOLVED      DISSOLVED      DISSOLVED      DISSOLVED      DISSOLVED      DISSOLVED       TOTAL         EXTRBLE.

                SUBM     NA             MG             K              F              CL             SO4            FE             FE
                 ID     MG/L           MG/L           MG/L           MG/L           MG/L           MG/L           MG/L           MG/L
SAMPLES(FLAGS)          4(0)           4(0)           4(0)           4(0)           4(0)           4(0)           1(0)           3(0)
           LOW           7.4            8.             1.20            .92           5.            60.             .10            .11
          HIGH          23.0           22.             2.4            1.40          45.00          120.             .10            .610
       AVERAGE          15.3           13.8           1.85           1.058          25.63           77.0                          .427
      STD.DEV.           7.8            6.0            .64            .229          18.18           28.9                          .275
  PERCNT:10TH
          25TH           8.7            9.6           1.30            .930          10.75           60.0
   MEDIAN 50TH          15.5           12.6           1.90            .955          26.25           63.9                          .56
          75TH          22.0           18.0           2.40           1.185          40.50           93.9
          90TH
SECONDARY CODE          11L            11L            11L            06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  66                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                      INDUSTRIAL MONITORING
STATION 20AL05EB2701     LAT. 53D 34M 19S  LONG. 113D 21M  3S   PR 3   UTM 12 344350E 5938250N  FOR JUL 28, 1981 TO AUG 08, 1984
FIBERGLASS CANADA LTD EDMONTON              FINAL EFFLUENT COMP.
SE S17 T53 R23 W4M

                            07105L       07205L       07562L       07021L       07906L       07905L       15421L       97160S
                           NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN    PHOSPHORUS   DISCHARGE
                           DISSOLVED    DISSOLVED    DISSOLVED      TOTAL     PARTICULATE  PARTICULATE    TOTAL       INSTANT
                           NO3 & NO2    NITRITE      AMMONIA      KJELDAHL      TOTAL       (CALCD.)
                  SUBM         N            N            N            N            N            N            P
                   ID        MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         M3/S
SAMPLES(FLAGS)               4(0)         4(2)         3(0)         3(0)         2(0)                      3(0)
           LOW               .300         L.02         1.210        2.000         .070                      .094
          HIGH              2.75          1.00         2.200        5.9           .19                       .41
       AVERAGE              1.445          .480*       1.680        3.833         .130                      .281
      STD.DEV.              1.053          .518*        .497        1.960         .085                      .166
   PERCNT:10TH
          25TH               .640         L.035
   MEDIAN 50TH              1.365          .450*       1.63         3.600         .130                      .340
          75TH              2.250          .925
          90TH
SECONDARY CODE                                         61L          15L                                    19L

                            10474L       10407L       10511L       10453L       14101L       97160S       97163S
                           RESIDUE      RESIDUE      RESIDUE      RESIDUE      SILICA      DISCHARGE    DISCHARGE
                            TOTAL     NONFILTRABLE   VOLATILE    FILTRABLE    REACTIVE      INSTANT       DAILY
                                                    NONFILTR.                                             MEAN
                  SUBM                              (CALCD.)                    SIO2
                   ID       MG/L         MG/L         MG/L         MG/L         MG/L         M3/S          CFS
SAMPLES(FLAGS)               4(0)         4(0)                      3(0)         4(0)                      4(0)
           LOW              253.0         15.0                     240.0         3.80                      .22
          HIGH              566.         106.                      460.          8.1                       .45
       AVERAGE              406.9         60.0                     383.3         6.30                      .3650
      STD.DEV.              138.6         49.2                     124.2         1.82                      .1008
   PERCNT:10TH
          25TH              295.9         17.5                                   5.05                      .3000
   MEDIAN 50TH              404.4         59.4                     450.          6.65                      .3950
          75TH              518.0        102.4                                   7.55                      .4300
          90TH
SECONDARY CODE              71L          01L                                    02L

                            00205L       02074L       06537L       06524L       02001L       16101L       10701L       06608L
                            TOTAL       TURBIDITY    PHENOLIC     OIL AND      ODOUR       SULPHIDE     SURFACT.      CYANIDE
                           DISSOLVED                 MATERIAL     GREASE      THRESHOLD    DISSOLVED    N-ALKYL
                            SOLIDS                                             NUMBER                   SULPHNTS.
                  SUBM                               PHENOL                                    S           LAS          CN
                   ID       MG/L         NTU          MG/L         MG/L          TON          MG/L         MG/L         MG/L
SAMPLES(FLAGS)               4(0)         4(0)         2(0)         2(0)         1(0)                      3(0)
           LOW              224.3          2.0         .005        2.900          1.                       .18
          HIGH              315.          35.0         .079        8.0            1.                       .55
       AVERAGE              264.8         13.8         .042        5.450                                   .307
      STD.DEV.               41.5         15.1         .052        3.606                                   .211
   PERCNT:10TH
          25TH              231.1          3.0
   MEDIAN 50TH              260.0          9.0         .042        5.450                                   .19
          75TH              298.5         24.5
          90TH
SECONDARY CODE                                                     21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  67                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 20AL05EB2701    LAT. 53D 34M 19S  LONG. 113D 21M  3S   PR 3   UTM 12 344350E 5938250N  FOR JUL 28, 1981 TO AUG 08, 1984
FIBERGLASS CANADA LTD EDMONTON           FINAL EFFLUENT COMP.
SE S17 T53 R23 W4M

                            08304L         08202L         06107L         06154L         06001L         06051L         06006L         06905L
                            OXYGEN         OXYGEN         CARBON         CARBON         CARBON         CARBON         CARBON         CARBON
                              TOTAL        BIOCHEM.       DISSOLVED      DISSOLVED       TOTAL          TOTAL        TOTAL          PARTICULATE
                              COD          DEMAND-BOD     ORGANIC        INORGANIC       ORGANIC        INORGANIC                     TOTAL
                 SUBM       02                02          C              C              C              C              C              C
                  ID        MG/L           MG/L           MG/L           MG/L           MG/L           MG/L           MG/L           MG/L
SAMPLES(FLAGS)                3(0)                          2(0)           2(0)           1(0)                                          2(0)
           LOW                  2.0                           3.30          18.10          11.3                                            .91
          HIGH                 17.7                           5.0           43.0           11.3                                           2.45
       AVERAGE                 11.6                           4.15          30.55                                                         1.68
      STD.DEV.                  8.4                           1.20          17.61                                                         1.09
   PERCNT:10TH
          25TH
    MEDIAN 50TH                15.2                           4.15          30.55                                                         1.68
          75TH
          90TH
SECONDARY CODE              01L                                                         07L

                            24101L         24009L         24302L         80015L         80011L         27009L         27302L         47304L
                            CHROMIUM       CHROMIUM       CHROMIUM       MERCURY        MERCURY        COBALT         COBALT         SILVER
                            HEXAVALENT     TOTAL           EXTRBLE.      TOTAL          TOTAL          TOTAL          EXTRBLE.       EXTRBLE.

                 SUBM         CR             CR             CR            HG             HG             CO             CO             AG
                  ID        MG/L           MG/L           MG/L            MG/L           UG/L           MG/L           MG/L           MG/L
SAMPLES(FLAGS)                3(3)           1(0)                          2(2)                         1(0)
           LOW              L.001             .019                        L.0001                          .007
          HIGH              L.01              .019                        L.0001                          .007
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
    MEDIAN 50TH              L.001                                        L.0001
          75TH
          90TH
SECONDARY CODE

                            29009L         29305L         28009L         28302L         48009L         48302L         82009L         82302L
                            COPPER         COPPER         NICKEL         NICKEL         CADMIUM        CADMIUM        LEAD           LEAD
                              TOTAL        EXTRBLE.       TOTAL          EXTRBLE.       TOTAL          EXTRBLE.       TOTAL          EXTRBLE.

                 SUBM       CU             CU             NI             NI             CD             CD             PB             PB
                  ID        MG/L           MG/L           MG/L           MG/L           MG/L           MG/L           MG/L           MG/L
SAMPLES(FLAGS)                1(0)                          1(0)                          1(0)                                          1(1)
           LOW                 .022                          .020                          .004                                         L.003
          HIGH                 .022                          .020                          .004                                         L.003
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
    MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE  68                         NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                        INDUSTRIAL MONITORING
STATION 20AL05EB2701    LAT. 53D 34M 19S  LONG. 113D 21M  3S   PR 3   UTM 12 344350E 5938250N  FOR AUG 08, 1984 TO AUG 08, 1984
FIBERGLASS CANADA LTD EDMONTON           FINAL EFFLUENT COMP.
SE S17 T53 R23 W4M

                          30009L          30305L          25003L          25304L          23009L          42304L          42009L          51003L
                           ZINC            ZINC         MANGANESE       MANGANESE        VANADIUM       MOLYBDENUM      MOLYBDENUM       ANTIMONY
                          TOTAL          EXTRBLE.         TOTAL          EXTRBLE.         TOTAL          EXTRBLE.         TOTAL           TOTAL

                   SUBM     ZN              ZN              MN              MN              V               MO              MO              SB
                    ID     MG/L            MG/L            MG/L            MG/L            MG/L            MG/L            MG/L            MG/L
SAMPLES(FLAGS)             1(0)                            1(0)                            1(0)                            1(0)
           LOW              .101                            .035                            .008                            .006
          HIGH              .101                            .035                            .008                            .006
       AVERAGE
      STD.DEV.
  PERCNT:10TH
          25TH
  MEDIAN  50TH
          75TH
          90TH
SECONDARY CODE

                          33005L          33104L          34005L          34102L          13111L          13306L          04102L          04304L
                          ARSENIC         ARSENIC        SELENIUM        SELENIUM        ALUMINUM        ALUMINUM       BERYLLIUM       BERYLLIUM
                         TOTAL          DISSOLVED      TOTAL            DISSOLVED       DISSOLVED        EXTRBLE.       DISSOLVED        EXTRBLE.

                   SUBM     AS              AS              SE              SE              AL              AL              BE              BE
                    ID     MG/L            MG/L            MG/L            MG/L            UG/L            MG/L            MG/L            MG/L
SAMPLES(FLAGS)             1(0)                            1(1)                                            1(0)                            1(1)
           LOW             .0006                          L.0002                                            .500                           L.001
          HIGH             .0006                          L.0002                                            .500                           L.001
       AVERAGE
      STD.DEV.
  PERCNT:10TH
          25TH
  MEDIAN  50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 - 0003 PAGE 69

NAQUADAT SUMMARY REPORT JAN 08, 1986
INDUSTRIAL MONITORING

STATION 20AL05EB2800 LAT. 53D 34M 21S LONG. 113D 21M 13S PR 3 UTM 12 344150E 5938300N FOR APR 11, 1984 TO JUN 05, 1984
ALBERTA PUBLIC WORKS RESEARCH PILOT PLANT CLOVER BAR
EFFLUENT GRAB SE S17 T53 R23 W4M

	02061F TEMPERATURE OF WATER	10301L PH	10301F PH	10151L ALKALINITY PHENOL PHTHALEIN	10101L ALKALINITY TOTAL	02041L SPECIFIC CONDUCT.	97160S DISCHARGE INSTANT	97163S DISCHARGE DAILY MEAN
SUBM ID	DEG.C	PH UNITS	PH UNITS	CACO3 MG/L	CACO3 MG/L	US/CM	M3/S	CFS
SAMPLES(FLAGS)		2(0)		1(0)	2(0)	2(0)		
LOW		7.00		.0	49.6	281.		
HIGH		7.90		.0	69.4	284.		
AVERAGE					59.5	283.		
STD.DEV.					14.0	2.		
PERCNT:10TH								
25TH								
MEDIAN 50TH		7.45			59.5	283.		
75TH								
90TH								
SECONDARY CODE								

	06201L BICARBONT. (CALCD.)	06202L BICARBONT. (CALCD.)	06301L CARBONATE (CALCD.)	20103L CALCIUM DISSOLVED	20105L CALCIUM DISSOLVED (CALCD.)	10602L HARDNESS TOTAL (CALCD.)	10604L HARDNESS TOTAL	97160S DISCHARGE INSTANT
SUBM ID	HCO3 MG/L	HCO3 MG/L	CO3 MG/L	CA MG/L	CA MG/L	CACO3 MG/L	CACO3 MG/L	M3/S
SAMPLES(FLAGS)	1(0)	2(0)	1(0)	2(0)	1(0)	2(0)		
LOW	85.	60.	0.	24.0	20.7	97.0		
HIGH	85.	85.	0.	25.0	20.7	107.7		
AVERAGE		73.		24.5		102.3		
STD.DEV.		17.		.7		7.6		
PERCNT:10TH								
25TH								
MEDIAN 50TH		73.		24.5		102.3		
75TH								
90TH								
SECONDARY CODE				10L				

	11103L SODIUM DISSOLVED	12102L MAGNESIUM DISSOLVED	19103L POTASSIUM DISSOLVED	09107L FLUORIDE DISSOLVED	17203L CHLORIDE DISSOLVED	16306L SULPHATE DISSOLVED	26009L IRON TOTAL	26304L IRON EXTRBLE.
SUBM ID	NA MG/L	MG MG/L	K MG/L	F MG/L	CL MG/L	SO4 MG/L	FE MG/L	FE MG/L
SAMPLES(FLAGS)	2(0)	2(0)	2(0)	2(0)	2(0)	2(0)		2(0)
LOW	6.0	9.0	1.70	.940	6.00	52.0		.080
HIGH	7.0	11.0	2.50	1.010	7.00	67.0		.160
AVERAGE	6.5	10.0	2.10	.975	6.50	59.5		.120
STD.DEV.	.7	1.4	.57	.049	.71	10.6		.057
PERCNT:10TH								
25TH								
MEDIAN 50TH	6.5	10.0	2.10	.975	6.50	59.5		.120
75TH								
90TH								
SECONDARY CODE								

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0004 -  0006 PAGE  70                         NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                        INDUSTRIAL MONITORING
STATION 20AL05EB2800    LAT. 53D 34M 21S  LONG. 113D 21M 13S   PR 3   UTM 12 344150E 5938300N  FOR APR 11, 1984 TO JUN 05, 1984
ALBERTA PUBLIC WORKS RESEARCH                PILOT PLANT CLOVER BAR
EFFLUENT GRAB                                SE S17 T53 R23 W4M

                           07105L      07205L      07562L      07021L      07906L       07905L       15421L      97160S
                          NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN     NITROGEN    PHOSPHORUS   DISCHARGE
                          DISSOLVED   DISSOLVED   DISSOLVED    TOTAL    PARTICULATE  PARTICULATE    TOTAL       INSTANT
                   SUBM   NO3 & NO2   NITRITE     AMMONIA     KJELDAHL     TOTAL       (CALCD.)
                    ID       N           N           N           N           N            N            P
                            MG/L        MG/L        MG/L        MG/L        MG/L         MG/L         MG/L
SAMPLES(FLAGS)              2(0)        2(1)        2(0)        2(0)        2(0)                      2(0)        M3/S
           LOW              .130        L.050       1.300       2.900        .160                      .310
          HIGH              .250         .170       2.150       6.600        .410                      .430
       AVERAGE              .190         .110*      1.725       4.750        .285                      .370
      STD.DEV.              .085         .085*       .601       2.616        .177                      .085
  PERCNT:10TH
          25TH
   MEDIAN 50TH              .190         .110*      1.725       4.750        .285                      .370
          75TH
          90TH
SECONDARY CODE

                           10474L      10407L       10511L      10453L      14101L       97160S       97163S
                          RESIDUE      RESIDUE      RESIDUE     RESIDUE     SILICA      DISCHARGE    DISCHARGE
                           TOTAL     NONFILTRABLE   VOLATILE   FILTRABLE   REACTIVE      INSTANT       DAILY
                                                   NONFILTR.                                           MEAN
                  SUBM                             (CALCD.)                 SIO2
                   ID      MG/L        MG/L         MG/L        MG/L        MG/L          M3/S          CFS
SAMPLES(FLAGS)             1(0)        2(0)                     1(0)        2(0)
           LOW             243.0         3.0                    240.0        3.30
          HIGH             243.0        49.2                    240.0        3.50
       AVERAGE                          26.1                                 3.40
      STD.DEV.                          32.7                                  .14
  PERCNT:10TH
          25TH
   MEDIAN 50TH                          26.1                                 3.40
          75TH
          90TH
SECONDARY CODE                                                              02L

                           00205L      02074L       06537L      06524L      02001L       16101L       10701L       06608L
                           TOTAL      TURBIDITY     PHENOLIC    OIL AND      ODOUR       SULPHIDE     SURFACT.      CYANIDE
                          DISSOLVED                 MATERIAL    GREASE     THRESHOLD    DISSOLVED     N-ALKYL
                           SOLIDS                                            NUMBER                   SULPHNTS.
                  SUBM                               PHENOL                                 S            LAS          CN
                   ID      MG/L         NTU          MG/L        MG/L         TON          MG/L         MG/L         MG/L
SAMPLES(FLAGS)             2(0)                      2(0)        1(0)
           LOW             142.7                      .008        .900
          HIGH             148.6                      .011        .900
       AVERAGE             145.7                      .010
      STD.DEV.               4.2                      .002
  PERCNT:10TH
          25TH
   MEDIAN 50TH             145.7                      .010
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  71                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                         INDUSTRIAL MONITORING
STATION 20AL05EB2800    LAT. 53D 34M 21S  LONG. 113D 21M 13S   PR 3   UTM 12 344150E 5938300N  FOR APR 11, 1984 TO JUN 05, 1984
ALBERTA PUBLIC WORKS RESEARCH             PILOT PLANT CLOVER BAR
EFFLUENT GRAB                             SE S17 T53 R23 W4M

                          08304L       08202L       06107L       06154L       06001L       06051L       06006L       06905L
                          OXYGEN       OXYGEN       CARBON       CARBON       CARBON       CARBON       CARBON       CARBON
                           TOTAL       BIOCHEM.     DISSOLVED    DISSOLVED     TOTAL        TOTAL      TOTAL       PARTICULATE
                            COD       DEMAND-BOD    ORGANIC      INORGANIC    ORGANIC     INORGANIC                   TOTAL
                  SUBM      02           02           C            C            C            C            C           C
                   ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             2(0)                      2(0)         2(0)                                               2(0)
           LOW             20.5                      4.20        12.80                                               1.82
          HIGH             21.6                      6.20        16.20                                               4.36
       AVERAGE             21.0                      5.20        14.50                                               3.34
      STD.DEV.               .8                      1.41         2.40                                               2.15
  PERCNT:10TH
          25TH
   MEDIAN 50TH             21.0                      5.20        14.50                                               3.34
          75TH
          90TH
SECONDARY CODE

                          24101L       24009L       24302L       80015L       80011L       27009L       27302L       47304L
                         CHROMIUM     CHROMIUM     CHROMIUM     MERCURY      MERCURY      COBALT       COBALT       SILVER
                        HEXAVALENT     TOTAL       EXTRBLE.      TOTAL        TOTAL        TOTAL       EXTRBLE.     EXTRBLE.

                  SUBM     CR           CR           CR           HG           HG           CO           CO           AG
                   ID     MG/L         MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             1(1)         2(1)                      2(1)                      2(2)
           LOW            L.001        L.001                     L.0001                    L.001
          HIGH            L.001         .008                      .0002                    L.001
       AVERAGE                          .004*                     .0001*
      STD.DEV.                          .005*                     .0001*
  PERCNT:10TH
          25TH
   MEDIAN 50TH                          .004*                     .0001*                   L.001
          75TH
          90TH
SECONDARY CODE

                          29009L       29305L       28009L       28302L       48009L  .    48302L       82009L       82302L
                          COPPER       COPPER       NICKEL       NICKEL      CADMIUM      CADMIUM       LEAD         LEAD
                           TOTAL       EXTRBLE.      TOTAL       EXTRBLE.     TOTAL       EXTRBLE.      TOTAL       EXTRBLE.

                  SUBM      CU           CU           NI           NI           CD           CD           PB           PB
                   ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             2(0)                      2(0)                      2(2)                                  2(0)
           LOW             .007                      .005                     L.001                                  .008
          HIGH             .012                      .008                     L.001                                  .011
       AVERAGE             .010                      .007                                                            .010
      STD.DEV.             .004                      .002                                                            .002
  PERCNT:10TH
          25TH
   MEDIAN 50TH             .010                      .007                     L.001                                  .010
          75TH
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE  72                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                      INDUSTRIAL MONITORING
STATION 20AL05EB2800    LAT. 53D 34M 21S  LONG. 113D 21M 13S   PR 3   UTM 12 344150E 5938300N  FOR APR 11, 1984 TO JUN 05, 1984
ALBERTA PUBLIC WORKS RESEARCH                 PILOT PLANT CLOVER BAR
EFFLUENT GRAB                                 SE S17 T53 R23 W4M

                           30009L     30305L     25003L     25304L     23009L     42304L     42009L     51003L
                            ZINC       ZINC     MANGANESE  MANGANESE  VANADIUM  MOLYBDENUM MOLYBDENUM  ANTIMONY
                           TOTAL     EXTRBLE.    TOTAL     EXTRBLE.    TOTAL     EXTRBLE.    TOTAL      TOTAL

                   SUBM     ZN         ZN         MN         MN          V          MO         MO         SB
                    ID     MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)             2(0)                  2(1)                  2(1)                  2(1)
           LOW             .020                  L.008                 L.002                 L.001
          HIGH             .022                  .010                  .003                  .007
       AVERAGE             .021                  .009*                 .002*                 .004*
      STD.DEV.             .001                  .001*                 .001*                 .004*
  PERCNT:10TH
          25TH
  MEDIAN  50TH             .021                  .009*                 .002*                 .004*
          75TH
          90TH
SECONDARY CODE

                           33005L     33104L     34005L     34102L     13111L     13306L     04102L     04304L
                          ARSENIC    ARSENIC    SELENIUM   SELENIUM   ALUMINUM   ALUMINUM  BERYLLIUM  BERYLLIUM
                           TOTAL    DISSOLVED   TOTAL     DISSOLVED  DISSOLVED  EXTRBLE.  DISSOLVED   EXTRBLE.

                   SUBM     AS         AS         SE         SE         AL         AL         BE         BE
                    ID     MG/L       MG/L       MG/L       MG/L       UG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)             2(0)                  2(2)                             2(0)                  2(2)
           LOW             .0006                 L.0002                           .307                  L.001
          HIGH             .0006                 L.0002                           1.110                 L.001
       AVERAGE             .0006                                                  .709
      STD.DEV.             .0000                                                  .566
  PERCNT:10TH
          25TH
  MEDIAN  50TH             .0006                 L.0002                           .709                  L.001
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  73                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB3000    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR APR 29, 1980 TO JUL 26, 1984
CELANESE CANADA LTD EDMONTON             SOUTH FLUME GRAB
S17 T53 R23 W4M

                          02061F        10301L        10301F        10151L        10101L        02041L        97160S        97163S
                        TEMPERATURE       PH            PH        ALKALINITY    ALKALINITY     SPECIFIC     DISCHARGE     DISCHAREE
                         OF WATER                                    PHENOL        TOTAL       CONDUCT.      INSTANT        DAILY
                                                                   PHTHALEIN                                                 MEAN
                   SUBM                                              CACO3         CACO3
                    ID    DEG.C        PH UNITS      PH UNITS        MG/L          MG/L         US/CM         M3/S           CFS
SAMPLES(FLAGS)            11(0)         16(0)         2(0)          15(2)         16(0)         16(0)                       16(0)
           LOW              8.6           7.2          7.6             .0           72.          406.                        .41
          HIGH             34.0           8.5          7.8            5.8          155.         1560.                       9.2
       AVERAGE             23.0                                        .7*         130.9         611.                       5.6275
      STD.DEV.              8.1                                       1.8*          22.0         300.                       2.4306
   PERCNT:10TH             14.0           7.3                          .0          109.          406.                       2.13
          25TH             17.0           7.50                         .0          117.6         445.                       4.3850
    MEDIAN 50TH            24.0           7.75         7.70            .0          132.0         515.                       6.2600
          75TH             31.0           8.00                         .0          149.0         606.                       7.3350
          90TH             34.0           8.5                         L4.          155.         1079.                       8.1
SECONDARY CODE

                          06201L        06202L        06301L        20103L        20105L        10602L        10604L        97160S
                        BICARBONT.    BICARBONT.    CARBONATE      CALCIUM       CALCIUM      HARDNESS      HARDNESS     DISCHARGE
                         (CALCD.)      (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED       TOTAL         TOTAL        INSTANT
                                                                                 (CALCD.)     (CALCD.)
                   SUBM   HCO3          HCO3          CO3            CA            CA           CACO3         CACO3
                    ID   MG/L           MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)            15(2)         5(0)          15(2)         15(0)         2(0)          11(0)         6(0)
           LOW              88.          138.            0.          35.0          41.8         147.7         154.
          HIGH             189.          162.            7.          71.0          54.1         250.6         232.0
       AVERAGE             158.*         154.            1.*         53.1          47.9         191.9         197.8
      STD.DEV.              27.*          10.            2.*         10.5           8.7          31.7          26.2
   PERCNT:10TH             133.                          0.          41.0                       163.4
          25TH             138.          155.            0.          46.                        168.4         191.7
    MEDIAN 50TH            160.          156.            0.          49.2          47.9         185.7         197.2
          75TH             179.          160.            0.          61.0                       214.2         215.0
          90TH             185.                         Q5.          67.                        237.3
SECONDARY CODE                                               11L 10L

                          11103L        12102L        19103L        09107L        17203L        16306L        26009L        26304L
                          SODIUM      MAGNESIUM     POTASSIUM      FLUORIDE      CHLORIDE      SULPHATE        IRON          IRON
                        DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED       TOTAL       EXTRBLE.

                   SUBM    NA            MG             K             F             CL            SO4           FE            FE
                    ID    MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)            16(0)         16(0)         16(0)         16(0)         14(0)         16(0)         4(0)          11(0)
           LOW             18.           11.0           1.1           .16          11.           51.9           .17          .130
          HIGH            207.           31.0           3.85          .54         340.          363.0          2.24         1.39
       AVERAGE             46.7          15.3           2.15          .297         48.40        106.2          1.232         .325
      STD.DEV.             51.4           4.8            .81          .107         85.55         73.8          1.159         .364
   PERCNT:10TH             18.           12.            1.3           .18          13.           63.0                        .14
          25TH             20.5          12.0           1.40          .225         13.00         74.5           .230         .15
    MEDIAN 50TH            26.8          13.5           2.05          .265         22.00         81.5          1.260         .17
          75TH             44.0          16.8           2.80          .355         32.20        114.0          2.235         .35
          90TH            136.0          19.0           3.2           .50          67.6         160.                         .35
SECONDARY CODE           11L           11L           11L        06L 05L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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NAQUADAT SUMMARY REPORT JAN 08, 1986
INDUSTRIAL MONITORING

STATION 20AL05EB3000 LAT. 53D 34M 47S LONG. 113D 21M 50S PR 3 UTM 12 343500E 5939150N FOR APR 29, 1980 TO JUL 26, 1984
CELANESE CANADA LTD EDMONTON SOUTH FLUME GRAB
S17 T53 R23 W4M

SUBM ID	07105L NITROGEN DISSOLVED NO3 & NO2 N MG/L	07205L NITROGEN DISSOLVED NITRITE N MG/L	07562L NITROGEN DISSOLVED AMMONIA N MG/L	07021L NITROGEN TOTAL KJELDAHL N MG/L	07906L NITROGEN PARTICULATE TOTAL N MG/L	07905L NITROGEN PARTICULATE (CALCD.) N MG/L	15421L PHOSPHORUS TOTAL P MG/L	97160S DISCHARGE INSTANT M3/S
SAMPLES(FLAGS)	16(2)	15(10)	14(0)	15(0)	10(2)		15(0)	
LOW	L.05	L.02	.03	.60	L.01		.13	
HIGH	1.10	.29	2.470	4.000	2.04		.550	
AVERAGE	.4[illegible]0*	.064*	.445	1.707	.432*		.242	
STD.DEV.	.334*	.063*	.608	1.180	.608*		.118	
PERCNT:10TH	L.05	.035	.10	.700	L.010		.130	
25TH	.150	L.05	.160	.800	.090		.155	
MEDIAN 50TH	.285	L.05	.303	1.310	.215		.207	
75TH	.610	.05	.41	2.500	.52		.330	
90TH	1.00	.07	.62	3.86	1.370		.400	
SECONDARY CODE	10L	06L	61L	15L			19L 06L	

SUBM ID	10474L RESIDUE TOTAL MG/L	10407L RESIDUE NONFILTRABLE MG/L	10511L RESIDUE VOLATILE NONFILTR. (CALCD.) MG/L	10453L RESIDUE FILTRABLE MG/L	14101L SILICA REACTIVE SIO2 MG/L	97160S DISCHARGE INSTANT M3/S	97163S DISCHARGE DAILY MEAN CFS
SAMPLES(FLAGS)	15(0)	16(0)	2(0)	10(0)	16(0)		16(0)
LOW	326.	26.	55.0	300.	2.9		.41
HIGH	1079.	349.	106.0	730.	6.70		9.2
AVERAGE	541.3	109.0	80.5	463.0	4.58		5.6275
STD.DEV.	191.7	87.3	36.1	148.5	.96		2.4306
PERCNT:10TH	378.	28.		315.0	3.40		2.13
25TH	412.	47.5		340.	4.10		4.3850
MEDIAN 50TH	478.	75.5	80.5	430.0	4.60		6.2600
75TH	608.	165.0		520.	4.85		7.3350
90TH	800.	219.		715.0	5.9		8.1
SECONDARY CODE	71L	01L		51L	02L		

SUBM ID	00205L TOTAL DISSOLVED SOLIDS MG/L	02074L TURBIDITY NTU	06537L PHENOLIC MATERIAL PHENOL MG/L	06524L OIL AND GREASE MG/L	02001L ODOUR THRESHOLD NUMBER TON	16101L SULPHIDE DISSOLVED S MG/L	10701L SURFACT. N-ALKYL SULPHNTS. LAS MG/L	06608L CYANIDE CN MG/L
SAMPLES(FLAGS)	15(0)	14(0)	16(0)	16(3)	14(0)		12(0)	3(0)
LOW	218.7	12.0	.010	L.2	1.		.07	.003
HIGH	813.	380.0	.90	12.0	100.		1.63	.109
AVERAGE	340.4	84.2	.104	2.137*	18.		.386	.0437
STD.DEV.	142.8	100.3	.216	3.064*	35.		.483	.0571
PERCNT:10TH	230.	15.0	.010	L.2	1.		.08	
25TH	246.	30.0	.025	.400	1.		.080	
MEDIAN 50TH	318.	48.0	.041	.850	2.		.145	.019
75TH	370.0	82.0	.088	3.150	10.		.530	
90TH	401.0	200.0	.140	5.0	100.		.98	
SECONDARY CODE		73L		21L				

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0007 -  0009 PAGE  75                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB3000    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR APR 29, 1980 TO JUL 26, 1984
CELANESE CANADA LTD EDMONTON                  SOUTH FLUME GRAB
S17 T53 R23 W4M

                           08304L       08202L       06107L       06154L       06001L       06051L       06006L       06905L
                           OXYGEN       OXYGEN       CARBON       CARBON       CARBON       CARBON       CARBON       CARBON
                            TOTAL      BIOCHEM.     DISSOLVED    DISSOLVED      TOTAL        TOTAL      TOTAL       PARTICULATE
                             COD      DEMAND-BOD     ORGANIC     INORGANIC     ORGANIC     INORGANIC                   TOTAL
                     SUBM    02           02           C            C            C            C            C            C
                     ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             16(0)        15(3)        10(0)        10(0)         6(0)         1(0)         1(0)        10(0)
           LOW               17.2         2.50         3.30       23.            1.8        18.          26.            .97
          HIGH               63.7        21.7         94.0        37.0          25.0        18.          26.          33.82
       AVERAGE               30.0         8.50*       16.24       31.30         13.53                                 9.20
      STD.DEV.               12.9         5.12*       27.56        4.29          8.69                                10.94
  PERCNT:10TH                17.6         3.5          3.65       25.10                                               1.13
          25TH               19.9         L5.0         4.4        28.            8.                                   1.74
   MEDIAN 50TH               25.5         7.5          7.50       32.50         13.65                                 5.45
          75TH               37.5        10.5         12.         34.3          19.1                                  8.49
          90TH               47.6        16.0         54.00       36.00                                              28.91
SECONDARY CODE             01L                                           07L 05L

                           24101L       24009L       24302L       80015L       80011L       27009L       27302L       47304L
                          CHROMIUM     CHROMIUM     CHROMIUM      MERCURY      MERCURY      COBALT       COBALT       SILVER
                         HEXAVALENT     TOTAL       EXTRBLE.       TOTAL        TOTAL        TOTAL       EXTRBLE.     EXTRBLE.

                     SUBM    CR           CR           CR           HG           HG           CO           CO           AG
                     ID     MG/L         MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             15(0)        15(0)         1(0)        14(12)        2(2)        15(12)        1(1)         4(4)
           LOW               .008         .031         .08        L.0001        L.02         L.001        L.001        L.02
          HIGH               .225         .293         .08         .0005        L.02         L.01         L.001        L.02
       AVERAGE               .085         .105                     .0001*                     .004*
      STD.DEV.               .075         .087                     .0001*                     .004*
  PERCNT:10TH                .02          .036                    L.0001                     L.001
          25TH               .033         .048                    L.0001                     L.001                    L.020
   MEDIAN 50TH               .06          .062                    L.0001        L.020        L.001                    L.020
          75TH               .100         .14                     L.0001                     L.01                     L.020
          90TH               .225         .250                     .0003                     L.01
SECONDARY CODE

                           29009L       29305L       28009L       28302L       48009L       48302L       82009L       82302L
                           COPPER       COPPER       NICKEL       NICKEL       CADMIUM      CADMIUM       LEAD         LEAD
                            TOTAL      EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.

                     SUBM    CU           CU           NI           NI           CD           CD           PB           PB
                     ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             15(0)         1(0)        15(3)         1(0)        14(10)        1(1)         5(3)        11(9)
           LOW               .009         .028         .005         .006        L.001        L.001        L.003        L.002
          HIGH               .14          .028         .022         .006        L.01         L.001         .010        L.02
       AVERAGE               .029                      .013*                     .004*                     .005*        .010*
      STD.DEV.               .032                      .005*                     .004*                     .003*        .008*
  PERCNT:10TH                .010                      .008                     L.001                                 L.003
          25TH               .013                      .009                     L.001                     L.003        L.003
   MEDIAN 50TH               .018                      .012                      .002                     L.003         .006
          75TH               .031                     L.02                      L.01                       .006        L.02
          90TH               .048                      .020                     L.01                                  L.02
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE  76                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EP3000    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR APR 29, 1980 TO JUL 26, 1984
CELANESE CANADA LTD EDMONTON           SOUTH FLUME GRAB
S17 T53 R23 W4M

                          30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                           ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                          TOTAL      EXTRBLE.      TOTAL     EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                  SUBM     ZN          ZN          MN          MN          V           MO          MO          SB
                   ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            13(0)       1(0)        15(0)       1(0)        14(6)                   13(9)       3(2)
           LOW             .025        .048        .024        .17        L.002                   L.001       L.001
          HIGH             .297        .048        .286        .17        L.01                    L.02         .0012
       AVERAGE             .093                    .077                    .006*                   .008*       .0011*
      STD.DEV.             .073                    .064                    .003*                   .009*       .0001*
  PERCNT:10TH              .040                    .029                   L.002                   L.001
          25TH             .041                    .037                    .004                   L.001
   MEDIAN 50TH             .07                     .067                    .007                    .004       L.001
          75TH             .120                    .087                   L.01                    L.02
          90TH             .136                    .127                   L.01                    L.02
SECONDARY CODE                                                            02L

                          33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                          ARSENIC     ARSENIC    SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                          TOTAL      DISSOLVED   TOTAL       DISSOLVED   DISSOLVED   EXTRBLE.   DISSOLVED    EXTRBLE.

                  SUBM     AS          AS          SE          SE          AL          AL          BE          BE
                   ID     MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            9(2)        1(0)        8(6)        1(1)         3(0)       10(0)        3(3)       10(10)
           LOW            .0003       .0010       L.0002      L.0002      950.          .352      L.005       L.001
          HIGH            .0025       .0010        .0048      L.0002      1450.        2.580      L.005       L.003
       AVERAGE            .0011*                   .0011*                 1123.33       .917
      STD.DEV.            .0008*                   .0016*                  283.08       .658
  PERCNT:10TH                                                                           .426                  L.001
          25TH            .0006                   L.0002                                .525                  L.001
   MEDIAN 50TH            .0007                   L.0006                   970.         .699      L.005       L.001
          75TH            L.001                    .0013*                              1.020                  L.001
          90TH                                                                         2.000                  L.002
SECONDARY CODE                                 07L                                     02L                    02L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  77                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                    INDUSTRIAL MONITORING
STATION 20AL05EB3001    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR MAR 11, 1981 TO JUL 25, 1984
CELANESE CANADA LTD EDMONTON              SOUTH FLUME COMP.
S17 T53 R23 W4M

                        02061F        10301L        10301F        10151L        10101L        02041L        97160S        97163S
                      TEMPERATURE       PH            PH        ALKALINITY    ALKALINITY     SPECIFIC     DISCHARGE     DISCHARGE
                       OF WATER                                   PHENOL         TOTAL       CONDUCT.      INSTANT        DAILY
                                                                PHTHALEIN                                                  MEAN
               SUBM                                               CACO3         CACO3
                ID      DEG.C       PH UNITS      PH UNITS        MG/L          MG/L          US/CM         M3/S           CFS
SAMPLES(FLAGS)           1(0)          3(0)          1(0)          2(1)          3(0)          3(0)                        4(0)
           LOW           25.5           7.6           7.9            .0         144.0          521.                        2.13
          HIGH           25.5          7.70           7.9           L.1         155.0          666.                         7.9
       AVERAGE                                                      .0*         148.0          612.                      5.4650
      STD.DEV.                                                      .1*           6.1           80.                      2.4419
   PERCNT:10TH
          25TH                                                                                                           3.7900
   MEDIAN 50TH                         7.62                         .0*         145.1          650.                      5.9150
          75TH                                                                                                           7.1400
          90TH
SECONDARY CODE

                        06201L        06202L        06301L        20103L        20105L        10602L        10604L        97160S
                      BICARBONT.    BICARBONT.     CARBONATE      CALCIUM       CALCIUM      HARDNESS      HARDNESS     DISCHARGE
                       (CALCD.)      (CALCD.)      (CALCD.)      DISSOLVED     DISSOLVED      TOTAL         TOTAL        INSTANT
                                                                               (CALCD.)     (CALCD.)
               SUBM     HCO3          HCO3           CO3            CA            CA          CACO3         CACO3
                ID      MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)           2(1)          2(0)          2(1)          3(0)          1(0)          2(0)          2(0)
           LOW          Q175.          176.            0.          46.0          45.8         168.4         168.0
          HIGH           189.          177.           Q0.          68.0          45.8         232.0         197.0
       AVERAGE           182.*         176.            0.*         53.7                       200.2         182.5
      STD.DEV.            10.*           1.            0.*         12.4                        45.0          20.5
   PERCNT:10TH
          25TH
   MEDIAN 50TH           182.          176.            0.          47.0                       200.2         182.5
          75TH
          90TH
SECONDARY CODE                                              11L 10L

                        11103L        12102L        19103L        09107L        17203L        16306L        26009L        26304L
                        SODIUM      MAGNESIUM     POTASSIUM      FLUORIDE      CHLORIDE      SULPHATE        IRON          IRON
                      DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED       TOTAL        EXTRBLE.

               SUBM      NA            MG             K             F            CL            SO4            FE            FE
                ID      MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)           3(0)          3(0)          3(0)          3(0)          3(0)          3(0)          1(0)          1(0)
           LOW           43.0          13.0          1.30           .19         29.30          68.0          1.64          .190
          HIGH           48.0          19.0          3.19           .28          46.0         137.0          1.64          .190
       AVERAGE           45.2          15.7          2.53          .237         37.77          99.0
      STD.DEV.            2.6           3.0          1.07          .045          8.35          35.0
   PERCNT:10TH
          25TH
   MEDIAN 50TH           44.5          15.1           3.1          .240         38.00          92.0
          75TH
          90TH
SECONDARY CODE          11L           11L           11L         06L 05L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  78                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 20AL05EB3001    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR MAR 11, 1981 TO JUL 25, 1984
CELANESE CANADA LTD EDMONTON                  SOUTH FLUME COMP.
S17 T53 R23 W4M

                        07105L       07205L       07562L       07021L       07906L       07905L       15421L       97160S
                        NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     PHOSPHORUS   DISCHARGE
                        DISSOLVED    DISSOLVED    DISSOLVED    TOTAL        PARTICULATE  PARTICULATE  TOTAL         INSTANT
                        NO3 & NO2    NITRITE      AMMONIA      KJELDAHL     TOTAL        (CALCD.)
                  SUBM    N            N            N            N            N            N            P
                  ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            3(1)         3(1)         2(0)         3(0)         1(0)                      3(0)         M3/S
           LOW            L.050         .013         .005         .20          .510                      .156
          HIGH            1.00          .05          .10          .86          .510                      .260
       AVERAGE             .420*        .038*        .053         .573                                   .205
      STD.DEV.             .509*        .021*        .067         .338                                   .052
  PERCNT:10TH
          25TH
   MEDIAN 50TH             .210        L.050         .053         .660                                   .20
          75TH
          90TH
SECONDARY CODE          10L          06L          61L          15L                                   19L 06L

                        10474L       10407L       10511L       10453L       14101L       97160S       97163S
                        RESIDUE      RESIDUE      RESIDUE      RESIDUE      SILICA       DISCHARGE    DISCHARGE
                        TOTAL        NONFILTRABLE VOLATILE     FILTRABLE    REACTIVE      INSTANT     DAILY
                                                  NONFILTR.                                           MEAN
                  SUBM                            (CALCD.)                  SIO2
                  ID    MG/L         MG/L         MG/L         MG/L         MG/L         M3/S         CFS
SAMPLES(FLAGS)            4(0)         4(0)         1(0)         2(0)         3(0)                      4(0)
           LOW            420.         15.          11.0         390.         2.80                     2.13
          HIGH            590.0        160.0        11.0         410.0        6.30                     7.9
       AVERAGE            477.3        64.5                      400.0        4.53                     5.4650
      STD.DEV.             77.5        65.8                       14.1        1.75                     2.4419
  PERCNT:10TH
          25TH            427.0        21.5                                                            3.7900
   MEDIAN 50TH            449.5        41.5                      400.0        4.5                      5.9150
          75TH            527.5        107.5                                                           7.1400
          90TH
SECONDARY CODE          71L          01L                       51L          02L

                        00205L       02074L       06537L       06524L       02001L       16101L       10701L       06608L
                        TOTAL        TURBIDITY     PHENOLIC    OIL AND       ODOUR       SULPHIDE     SURFACT.      CYANIDE
                        DISSOLVED                  MATERIAL    GREASE       THRESHOLD    DISSOLVED    N-ALKYL
                         SOLIDS                                             NUMBER                    SULPHNTS.
                  SUBM                             PHENOL                                 S           LAS          CN
                  ID    MG/L         NTU          MG/L         MG/L         TON          MG/L         MG/L         MG/L
SAMPLES(FLAGS)            2(0)         4(0)         3(0)         3(0)         3(0)                      3(1)
           LOW            296.5        16.0         .006         1.2          1.                       L.01
          HIGH            445.0        74.0         .042         7.0          4.                        .10
       AVERAGE            370.7        37.0         .020         3.533        2.                        .040*
      STD.DEV.            105.0        25.9         .020         3.062        2.                        .052*
  PERCNT:10TH
          25TH                         19.5
   MEDIAN 50TH            370.7        29.0         .011         2.400        2.                        .01
          75TH                         54.5
          90TH
SECONDARY CODE                                                 21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  79                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB3001    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR MAR 11, 1981 TO JUL 25, 1984
CELANESE CANADA LTD EDMONTON                   SOUTH FLUME COMP.
S17 T53 R23 W4M

                      08304L       08202L       06107L       06154L       06001L       06051L       06006L       06905L
                      OXYGEN       OXYGEN       CARBON       CARBON       CARBON       CARBON       CARBON       CARBON
                       TOTAL      BIOCHEM.     DISSOLVED    DISSOLVED      TOTAL        TOTAL      TOTAL       PARTICULATE
                        COD      DEMAND-BOD     ORGANIC     INORGANIC     ORGANIC     INORGANIC                   TOTAL
              SUBM      02           02            C            C            C            C            C            C
               ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          3(0)         3(2)         1(0)         1(0)         2(0)                                   1(0)
           LOW          45.0         L5.0        10.50        36.30         10.0                                   6.16
          HIGH          57.6        14.00        10.50        36.30         18.8                                   6.16
       AVERAGE          50.9         8.00*                                 14.40
      STD.DEV.           6.3         5.20*                                  6.22
  PERCNT:10TH
          25TH
   MEDIAN 50TH          50.          L5.                                   14.40
          75TH
          90TH
SECONDARY CODE        01L                                            07L 05L

                      24101L       24009L       24302L       80015L       80011L       27009L       27302L       47304L
                     CHROMIUM     CHROMIUM     CHROMIUM     MERCURY      MERCURY      COBALT       COBALT       SILVER
                    HEXAVALENT     TOTAL       EXTRBLE.      TOTAL        TOTAL        TOTAL       EXTRBLE.     EXTRBLE.

              SUBM      CR           CR           CR           HG           HG           CO           CO           AG
               ID      MG/L         MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          4(1)         2(0)         1(0)         2(1)         1(1)         2(2)         1(1)         1(1)
           LOW          L.01         .028          .05        L.0001       L.000        L.001        L.001         L.02
          HIGH          .063         .150          .05         .0001       L.000        L.01         L.001         L.02
       AVERAGE          .037*        .089                      .0001*
      STD.DEV.          .029*        .086                      .0000*
  PERCNT:10TH
          25TH          .012*
   MEDIAN 50TH          .037         .089                      .0001*                   L.005
          75TH          .062
          90TH
SECONDARY CODE

                      29009L       29305L       28009L       28302L       48009L       48302L       82009L       82302L
                      COPPER       COPPER       NICKEL       NICKEL       CADMIUM      CADMIUM       LEAD         LEAD
                       TOTAL      EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.

              SUBM      CU           CU           NI           NI           CD           CD           PB           PB
               ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          2(0)         1(0)         2(1)         1(0)         2(2)         1(1)                      3(2)
           LOW          .036         .030         .014         .016        L.001        L.001                      L.003
          HIGH          .066         .030         L.02         .016        L.01         L.001                      L.02
       AVERAGE          .051                      .017*                                                            .009*
      STD.DEV.          .021                      .004*                                                            .009*
  PERCNT:10TH
          25TH
   MEDIAN 50TH          .051                      .017*                    L.005                                   .005
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE  80                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                         INDUSTRIAL MONITORING
STATION 20AL05EB3001    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR MAR 11, 1981 TO JUL 25, 1984
CELANESE CANADA LTD EDMONTON                  SOUTH FLUME COMP.
S17 T53 R23 W4M

                           30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                            ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                           TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                    SUBM     ZN          ZN          MN          MN          V           MO          MO          SB
                     ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              2(0)        1(0)        2(0)        1(0)        3(2)                    2(2)        1(0)
           LOW              .097        .380        .031        .10        L.001                   L.001        .004
          HIGH              .18         .380        .084        .10        L.01                    L.02         .004
       AVERAGE              .139                    .058                     .005*
      STD.DEV.              .059                    .037                     .005*
   PERCNT:10TH
          25TH
    MEDIAN 50TH             .139                    .058                     .004                   L.010
          75TH
          90TH
SECONDARY CODE                                                             02L

                           33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                           ARSENIC     ARSENIC    SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                           TOTAL      DISSOLVED   TOTAL       DISSOLVED   DISSOLVED   EXTRBLE.   DISSOLVED    EXTRBLE.

                    SUBM     AS          AS          SE          SE          AL          AL          BE          BE
                     ID     MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              2(0)        1(0)        1(1)        1(1)        1(0)        2(0)        1(1)        2(2)
           LOW              .0008       .0010      L.001       L.0002      1820.        1.270      L.005       L.001
          HIGH              .002        .0010      L.001       L.0002      1820.        1.48       L.005       L.001
       AVERAGE              .0014                                                       1.375
      STD.DEV.              .0008                                                        .148
   PERCNT:10TH
          25TH
    MEDIAN 50TH             .0014                                                       1.375                  L.001
          75TH
          90TH
SECONDARY CODE                          07L                                             02L                    02L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  81                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 20AL05EB3003    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR APR 29, 1980 TO JUL 26, 1984
CELANESE CANADA LTD EDMONTON               NORTH FLUME GRAB
S17 T53 R23 W4M

                    02061F        10301L        10301F        10151L        10101L        02041L        971605        971635
                  TEMPERATURE        PH            PH        ALKALINITY    ALKALINITY     SPECIFIC     DISCHARGE     DISCHARGE
                   OF WATER                                    PHENOL        TOTAL       CONDUCT.      INSTANT        DAILY
                                                             PHTHALEIN                                                 MEAN
               SUBM                                            CACO3         CACO3
                ID    DEG.C      PH UNITS      PH UNITS        MG/L          MG/L         US/CM          M3/S           CFS
SAMPLES(FLAGS)           11(0)         17(0)          2(0)         16(2)         17(0)         17(0)                       17(0)
           LOW             6.0           6.5           5.2            .0          84.0          377.                        .007
          HIGH            24.0           7.9           7.0           L.1          258.          812.                         .19
       AVERAGE            16.5                                       .0*         150.4          527.                       .1045
      STD.DEV.             5.3                                       .0*          39.8          144.                       .0549
   PERCNT:10TH            12.0           6.6                          .0         123.0          412.                         .03
          25TH            14.0           6.8                          .0          127.          420.                         .04
   MEDIAN 50TH            16.0           7.0          6.10            .0          138.          474.                        .123
          75TH            21.0           7.2                          .0         157.0          570.                        .123
          90TH            24.0           7.9                         L.1         211.0          762.                         .19
SECONDARY CODE

                    06201L        06202L        06301L        20103L        20105L        10602L        10604L        971605
                  BICARBONT.    BICARBONT.    CARBONATE      CALCIUM       CALCIUM      HARDNESS      HARDNESS     DISCHARGE
                   (CALCD.)      (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED       TOTAL         TOTAL        INSTANT
                                                                           (CALCD.)      (CALCD.)
               SUBM   HCO3          HCO3          CO3            CA            CA          CACO3         CACO3
                ID   MG/L           MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)           16(2)          6(0)         16(2)         16(0)          2(0)         12(0)          6(0)
           LOW           Q102.          103.            0.          33.0          42.6         127.7         151.5
          HIGH            315.          257.           Q0.           90.          42.9         311.2         330.0
       AVERAGE           183.*          170.           0.*          53.9          42.7         197.0         195.3
      STD.DEV.            50.*           51.           0.*          20.4            .2          69.0          67.6
   PERCNT:10TH            150.                          0.           35.                       149.2
          25TH            154.          150.            0.          41.6                       151.8          160.
   MEDIAN 50TH            166.          161.            0.          42.6          42.7         162.1         167.5
          75TH            193.          191.            0.          72.5                       258.4         195.0
          90TH           Q257.                         Q0.           88.                       310.3
SECONDARY CODE                                                 11L 10L

                    11103L        12102L        19103L        09107L        17203L        16306L        26009L        26304L
                    SODIUM      MAGNESIUM     POTASSIUM      FLUORIDE      CHLORIDE      SULPHATE        IRON          IRON
                  DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED       TOTAL       EXTRBLE.

               SUBM    NA            MG            K             F             CL           SO4           FE            FE
                ID    MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)           17(0)         17(0)         17(0)         17(0)         17(0)         17(0)          4(0)         11(0)
           LOW             10.           11.           2.2           .24            4.          39.0          1.10           .24
          HIGH             42.          29.0           7.0          1.40          59.0         200.0          3.73          3.87
       AVERAGE            20.5          15.8          4.19          .636         18.25          91.7         2.027         1.537
      STD.DEV.             9.3           4.8          1.30          .304         12.46          44.3         1.210         1.136
   PERCNT:10TH            13.0          11.0           2.6           .26            9.           42.                        .440
          25TH             14.           12.           3.4           .53          11.6          67.0         1.165           .59
   MEDIAN 50TH            16.0           15.           3.9           .61           14.           75.         1.640          1.00
          75TH             23.          17.2           5.0           .64         20.00          135.         2.890          2.25
          90TH            37.0           22.           6.2          1.30           28.          145.                        2.69
SECONDARY CODE      11L           11L           11L      06L 05L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  82                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB3003    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR APR 29, 1980 TO JUL 26, 1984
CELANESE CANADA LTD EDMONTON               NORTH FLUME GRAB
S17 T53 R23 W4M

                       07105L       07205L       07562L       07021L       07906L       07905L       15421L       97160S
                      NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN    PHOSPHORUS   DISCHARGE
                      DISSOLVED    DISSOLVED    DISSOLVED     TOTAL     PARTICULATE  PARTICULATE    TOTAL       INSTANT
                      NO3 & NO2     NITRITE     AMMONIA      KJELDAHL      TOTAL       (CALCD.)
                SUBM     N            N            N            N            N            N            P
                 ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         M3/S
SAMPLES(FLAGS)         17(10)       17(13)       14(0)        16(0)        10(0)                     16(0)
           LOW           .004         .000         .03          .80          .45                        .24
          HIGH         19.0           .17         7.700        60.0         3.84                      2.860
       AVERAGE          2.084*        .045*       3.486        11.203       1.566                     1.247
      STD.DEV.          5.776*        .037*       2.669        13.868       1.219                      .732
  PERCNT:10TH            .006        L.003         .079        2.600         .530                       .44
          25TH          L.05          .02         1.410        5.100         .88                       .635
    MEDIAN 50TH         L.05         L.05         3.020        7.118        1.160                     1.135
          75TH          L.050        L.05         5.50         11.750       1.440                     1.605
          90TH         15.7          L.050        7.420        20.560       3.805                     2.450
SECONDARY CODE         10L          06L          61L          15L                                 19L 06L

                       10474L       10407L       10511L       10453L       14101L       97160S       97163S
                      RESIDUE      RESIDUE      RESIDUE      RESIDUE      SILICA     DISCHARGE    DISCHARGE
                       TOTAL     NONFILTRABLE   VOLATILE    FILTRABLE    REACTIVE     INSTANT       DAILY
                                               NONFILTR.                                            MEAN
                SUBM                            (CALCD.)                   SIO2
                 ID     MG/L         MG/L         MG/L         MG/L         MG/L         M3/S          CFS
SAMPLES(FLAGS)         16(0)        17(0)         2(0)        11(0)        17(0)                      17(0)
           LOW          288.           9.         16.0         240.         3.00                      .007
          HIGH          838.         158.         37.0         680.         9.20                      .19
       AVERAGE          440.2         52.2        26.5         391.8        6.02                      .1045
      STD.DEV.          168.7         42.5        14.8         147.6        1.97                      .0549
  PERCNT:10TH           288.          11.                      270.         3.9                       .03
          25TH          313.5         21.                      300.         4.8                       .04
    MEDIAN 50TH         376.0         42.0        26.5         320.         5.3                       .123
          75TH          499.0         65.                      430.0        8.2                       .123
          90TH          733.         138.                      650.         9.0                       .19
SECONDARY CODE         71L          01L                       51L          02L

                       00205L       02074L       06537L       06524L       02001L       16101L       10701L       06608L
                        TOTAL      TURBIDITY    PHENOLIC     OIL AND       ODOUR      SULPHIDE     SURFACT.      CYANIDE
                      DISSOLVED                 MATERIAL     GREASE      THRESHOLD    DISSOLVED    N-ALKYL
                       SOLIDS                                              NUMBER                  SULPHNTS.
                SUBM                             PHENOL                                  S            LAS          CN
                 ID     MG/L         NTU          MG/L         MG/L          TON         MG/L         MG/L         MG/L
SAMPLES(FLAGS)         15(0)        15(0)        17(0)        17(0)        14(0)         1(0)        14(0)         2(2)
           LOW          187.4         4.0         .010          1.0           1.         1.50          .04        L.002
          HIGH          606.0        25.0         .789         38.1        1000.         1.50         2.50        L.002
       AVERAGE          300.2        11.6         .096          8.800       181.                       .523
      STD.DEV.          117.7         7.4         .182          9.902       354.                       .690
  PERCNT:10TH           211.          4.0         .015          1.4           1.                        .06
          25TH          217.          5.0         .025          3.1           2.                        .11
    MEDIAN 50TH         256.0        10.0         .050          4.900        10.                       .235        L.0020
          75TH          370.0        18.0         .070         10.0         128.                        .55
          90TH          474.         20.0         .140         27.0        1000.                       1.35
SECONDARY CODE                      73L                       21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  83                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                    INDUSTRIAL MONITORING
STATION 20AL05EB3003    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR APR 29, 1980 TO JUL 26, 1984
CELANESE CANADA LTD EDMONTON              NORTH FLUME GRAB
S17 T53 R23 W4M

                       08304L        08202L        06107L        06154L        06001L        06051L        06006L        06905L
                       OXYGEN        OXYGEN        CARBON        CARBON        CARBON        CARBON        CARBON        CARBON
                        TOTAL        BIOCHEM.      DISSOLVED     DISSOLVED      TOTAL         TOTAL        TOTAL         PARTICULATE
                         COD         DEMAND-BOD    ORGANIC       INORGANIC      ORGANIC       INORGANIC                   TOTAL
               SUBM    02               02         C             C              C             C             C            C
                ID     MG/L          MG/L          MG/L          MG/L           MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)         17(0)         14(0)         10(0)         10(0)           7(0)         1(0)          1(0)         10(0)
           LOW           38.2          8.            5.7           4.            7.4         32.           240.            2.81
          HIGH         1388.0        288.0         49.3          52.           208.          32.           240.           73.05
       AVERAGE          286.4         91.93        21.67         36.48          83.70                                     18.04
      STD.DEV.          326.6         89.12        15.58         12.82          75.65                                     21.11
   PERCNT:10TH           72.2         11.8          5.85         18.00                                                     3.45
          25TH          103.0         32.0         10.7          35.            11.5                                       5.28
   MEDIAN 50TH          138.2         53.85        16.50         37.60          74.5                                       8.70
          75TH          337.         180.0         39.           43.0          156.3                                      24.32
          90TH          642.0        207.0         44.80         48.60                                                    48.85
SECONDARY CODE         01L                                                 07L 05L

                       24101L        24009L        24302L        80015L        80011L        27009L        27302L        47304L
                       CHROMIUM      CHROMIUM      CHROMIUM      MERCURY       MERCURY       COBALT        COBALT        SILVER
                       HEXAVALENT    TOTAL          EXTRBLE.     TOTAL         TOTAL         TOTAL         EXTRBLE.      EXTRBLE.

               SUBM    CR            CR            CR            HG            HG            CO            CO            AG
                ID     MG/L          MG/L          MG/L          MG/L          UG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)         14(10)        14(0)          2(0)         16(12)         1(1)         14(12)         2(1)          4(4)
           LOW         L.001          .009          .02          L.0001         L.02         L.001         L.001         L.02
          HIGH         L.01          1.3            .02           .0004         L.02         L.01           .001         L.02
       AVERAGE          .005*         .323          .020          .0001*                      .004*         .001*
      STD.DEV.          .004*         .399          .000          .0001*                      .004*         .000*
   PERCNT:10TH         L.001          .013                       L.0001                      L.001
          25TH         L.001          .019                       L.0001                      L.001                       L.020
   MEDIAN 50TH          .004          .124          .020         L.0001                      L.001          .001*        L.020
          75TH         L.01           .623                        .0001*                     L.01                        L.020
          90TH         L.01           .725                        .0002                      L.01
SECONDARY CODE

                       29009L        29305L        28009L        28302L        48009L        48302L        82009L        82302L
                       COPPER        COPPER        NICKEL        NICKEL        CADMIUM       CADMIUM       LEAD          LEAD
                       TOTAL         EXTRBLE.      TOTAL         EXTRBLE.      TOTAL         EXTRBLE.      TOTAL         EXTRBLE.

               SUBM    CU            CU            NI            NI            CD            CD            PB            PB
                ID     MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)         14(0)          2(0)         14(2)          2(0)         13(10)         2(2)          5(0)         11(5)
           LOW           .017          .230        L.001           .009        L.001         L.001           .005        L.003
          HIGH           .229          .290          .050          .030        L.01          L.001           .043          .020
       AVERAGE           .091          .260          .017*         .020          .004*                       .016          .014*
      STD.DEV.           .058          .042          .013*         .015          .004*                       .016          .007*
   PERCNT:10TH           .037                        .005                      L.001                                       .004
          25TH           .046                        .007                      L.001                         .005          .008
   MEDIAN 50TH           .075          .260          .014          .020          .002        L.001           .012          .016
          75TH           .134                        .022                      L.01                          .016        L.02
          90TH           .152                        .03                       L.01                                      L.02
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE  84                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB3003    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR APR 29, 1980 TO JUL 26, 1984
CELANESE CANADA LTD EDMONTON             NORTH FLUME GRAB
S17 T53 R23 W4M
                         30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                          ZINC        ZINC      MANGANESE   MANGANESE    VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                         TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                 SUBM      ZN          ZN          MN          MN          V           MO          MO          SB
                  ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           13(0)        2(0)       14(0)        2(0)       14(4)                   12(10)        3(2)
           LOW            .034        .150        .046        .14         .001                   L.001       L.001
          HIGH            .52         .170        .278        .58         .030                   L.02         .0013
       AVERAGE            .128        .160        .134        .360        .007*                   .008*       .0011*
      STD.DEV.            .138        .014        .070        .311        .007*                   .009*       .0002*
   PERCNT:10TH            .037                    .053                    .001                   L.001
          25TH            .05                     .076                    .004                   L.001
   MEDIAN 50TH            .075        .160        .135        .360        .005                    .002*      L.001
          75TH            .118                    .173                   L.01                    L.020
          90TH            .276                    .227                   L.01                    L.02
SECONDARY CODE                                                          02L

                         33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                         ARSENIC     ARSENIC     SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                         TOTAL      DISSOLVED   TOTAL       DISSOLVED   DISSOLVED   EXTRBLE.   DISSOLVED    EXTRBLE.

                 SUBM      AS          AS          SE          SE          AL          AL          BE          BE
                  ID      MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            9(2)        2(0)        8(6)        2(2)        3(0)       10(0)        3(3)       10(10)
           LOW            .0007       .0033      L.0002      L.0002      750.         .252       L.005       L.001
          HIGH            .0020       .0047       .0026      L.0002     1230.        1.430       L.005       L.001
       AVERAGE            .0015*      .0040       .0007*                1043.33       .713
      STD.DEV.            .0005*      .0010       .0008*                 257.16       .445
   PERCNT:10TH                                                                        .269                   L.001
          25TH           L.001                   L.0002                               .320                   L.001
   MEDIAN 50TH            .0015       .0040       .0004*     L.0002     1150.         .656       L.005       L.001
          75TH            .002                   L.0010                               .93                    L.001
          90TH                                                                       1.420                   L.001
SECONDARY CODE                                   07L                                 02L                     02L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  85                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB3004    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR MAR 11, 1981 TO MAR 11, 1981
CELANESE CANADA LTD EDMONTON              NORTH FLUME COMP.
517 T53 R23 W4M

                       02061F        10301L        10301F        10151L        10101L        02041L        97160S        97163S
                     TEMPERATURE       PH            PH        ALKALINITY    ALKALINITY     SPECIFIC     DISCHARGE     DISCHARGE
                     OF WATER                                    PHENOL        TOTAL        CONDUCT.      INSTANT        DAILY
                                                               PHTHALEIN                                                 MEAN
                SUBM                                             CACO3         CACO3
                 ID    DEG.C        PH UNITS      PH UNITS       MG/L          MG/L          US/CM          M3/S          CFS
SAMPLES(FLAGS)          1(0)          1(0)          1(0)          1(0)          1(0)          1(0)                        1(0)
           LOW           6.0           7.3           6.6            .0         170.0          594.                        .007
          HIGH           6.0           7.3           6.6            .0         170.0          594.                        .007
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                       06201L        06202L        06301L        20103L        20105L        10602L        10604L        97160S
                     BICARBONT.    BICARBONT.    CARBONATE      CALCIUM       CALCIUM      HARDNESS      HARDNESS      DISCHARGE
                      (CALCD.)      (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED       TOTAL         TOTAL        INSTANT
                                                                              (CALCD.)      (CALCD.)
                SUBM   HCO3          HCO3          CO3            CA            CA          CACO3         CACO3
                 ID  MG/L            MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)          1(0)                        1(0)          1(0)                                    1(0)
           LOW          207.                          0.          62.0                                   233.0
          HIGH          207.                          0.          62.0                                   233.0
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                                     11L

                       11103L        12102L        19103L        09107L        17203L        16306L        26009L        26304L
                       SODIUM       MAGNESIUM     POTASSIUM     FLUORIDE      CHLORIDE      SULPHATE       IRON          IRON
                     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED      TOTAL         EXTRBLE.

                SUBM    NA            MG            K             F             CL           SO4           FE            FE
                 ID    MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          1(0)          1(0)          1(0)          1(0)          1(0)          1(0)          1(0)
           LOW          32.0          19.0           7.0           .41          28.0         117.0          2.27
          HIGH          32.0          19.0           7.0           .41          28.0         117.0          2.27
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE          11L           11L           11L           06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  86                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                    INDUSTRIAL MONITORING
STATION 20AL05EB3004    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR MAR 11, 1981 TO MAR 11, 1981
CELANESE CANADA LTD EDMONTON              NORTH FLUME COMP.
S17 T53 R23 W4M

                       07105L        07205L        07562L        07021L        07906L        07905L        15421L        97160S
                      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN     PHOSPHORUS    DISCHARGE
                     DISSOLVED     DISSOLVED     DISSOLVED       TOTAL      PARTICULATE   PARTICULATE      TOTAL        INSTANT
                     NO3 & NO2      NITRITE       AMMONIA      KJELDAHL        TOTAL        (CALCD.)
               SUBM      N             N             N             N             N             N             P
                ID      MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)          1(1)          1(1)          1(0)          1(0)                                      1(0)
           LOW          L.02          L.02           8.0          16.0                                      1.80
          HIGH          L.02          L.02           8.0          16.0                                      1.80
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                   61L           15L                                       19L

                       10474L        10407L        10511L        10453L        14101L        97160S        97163S
                      RESIDUE       RESIDUE       RESIDUE       RESIDUE        SILICA      DISCHARGE     DISCHARGE
                       TOTAL      NONFILTRABLE    VOLATILE     FILTRABLE      REACTIVE      INSTANT        DAILY
                                                 NONFILTR.                                                 MEAN
               SUBM                              (CALCD.)                      SIO2
                ID      MG/L          MG/L          MG/L          MG/L          MG/L          M3/S          CFS
SAMPLES(FLAGS)          1(0)          1(0)                                      1(0)                        1(0)
           LOW         520.0          49.0                                       7.0                        .007
          HIGH         520.0          49.0                                       7.0                        .007
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE         71L           01L                                       02L

                       00205L        02074L        06537L        06524L        02001L        16101L        10701L        06608L
                       TOTAL       TURBIDITY      PHENOLIC      OIL AND        ODOUR       SULPHIDE      SURFACT.      CYANIDE
                     DISSOLVED                    MATERIAL      GREASE       THRESHOLD     DISSOLVED      N-ALKYL
                       SOLIDS                                                  NUMBER                    SULPHNTS.
               SUBM                                PHENOL                                      S             LAS           CN
                ID      MG/L          NTU           MG/L          MG/L          TON           MG/L          MG/L          MG/L
SAMPLES(FLAGS)          1(0)          1(0)          1(0)          1(0)          1(0)                        1(0)
           LOW         472.0          20.0          .025          12.0           2.                         .04
          HIGH         472.0          20.0          .025          12.0           2.                         .04
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                                 21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  87                               NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                              INDUSTRIAL MONITORING
STATION 20AL05EB3004    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR MAR 11, 1981 TO MAR 11, 1981
CELANESE CANADA LTD EDMONTON                NORTH FLUME COMP.
S17 T53 R23 W4M

                             08304L       08202L       06107L       06154L       06001L       06051L       06006L       06905L
                             OXYGEN       OXYGEN       CARBON       CARBON       CARBON       CARBON       CARBON       CARBON
                              TOTAL      BIOCHEM.     DISSOLVED    DISSOLVED     TOTAL        TOTAL      TOTAL      PARTICULATE
                               COD      DEMAND-BOD    ORGANIC     INORGANIC     ORGANIC     INORGANIC                  TOTAL
                      SUBM     02           02           C            C            C            C            C            C
                       ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
    SAMPLES(FLAGS)            1(0)         1(0)                                   1(0)
               LOW            330.0        86.0                                  117.9
              HIGH            330.0        86.0                                  117.9
           AVERAGE
          STD.DEV.
      PERCNT:10TH
              25TH
       MEDIAN 50TH
              75TH
              90TH
    SECONDARY CODE            01L                                                07L

                             24101L       24009L       24302L       80015L       80011L       27009L       27302L       47304L
                            CHROMIUM     CHROMIUM     CHROMIUM     MERCURY      MERCURY       COBALT       COBALT       SILVER
                           HEXAVALENT     TOTAL       EXTRBLE.      TOTAL        TOTAL        TOTAL       EXTRBLE.     EXTRBLE.

                      SUBM     CR           CR           CR           HG           HG           CO           CO           AG
                       ID     MG/L         MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
    SAMPLES(FLAGS)            1(1)         1(0)                                   1(1)         1(1)                      1(1)
               LOW            L.01          .55                                   L.02         L.01                      L.02
              HIGH            L.01          .55                                   L.02         L.01                      L.02
           AVERAGE
          STD.DEV.
      PERCNT:10TH
              25TH
       MEDIAN 50TH
              75TH
              90TH
    SECONDARY CODE

                             29009L       29305L       28009L       28302L       48009L       48302L       82009L       82302L
                             COPPER       COPPER       NICKEL       NICKEL       CADMIUM      CADMIUM       LEAD         LEAD
                              TOTAL      EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.

                      SUBM     CU           CU           NI           NI           CD           CD           PB           PB
                       ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
    SAMPLES(FLAGS)            1(0)                      1(0)                      1(1)                                   1(1)
               LOW            .078                       .04                      L.01                                   L.02
              HIGH            .078                       .04                      L.01                                   L.02
           AVERAGE
          STD.DEV.
      PERCNT:10TH
              25TH
       MEDIAN 50TH
              75TH
              90TH
    SECONDARY CODE
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REQUEST 0010 -  0012 PAGE  88                  NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                 INDUSTRIAL MONITORING
STATION 20AL05EB3004    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR MAR 11, 1981 TO MAR 11, 1981
CELANESE CANADA LTD EDMONTON              NORTH FLUME COMP.
S17 T53 R23 W4M

                       30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                        ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                        TOTAL     EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                 SUBM    ZN          ZN          MN          MN          V           MO          MO          SB
                  ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)          1(0)                    1(0)                    1(1)                    1(1)        1(1)
          LOW            .38                     .126                   L.01                    L.02       L.001
         HIGH            .38                     .126                   L.01                    L.02       L.001
      AVERAGE
     STD.DEV.
  PERCNT:10TH
         25TH
  MEDIAN 50TH
         75TH
         90TH
SECONDARY CODE
                       33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                       ARSENIC     ARSENIC    SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                      TOTAL       DISSOLVED  TOTAL        DISSOLVED   DISSOLVED   EXTRBLE.   DISSOLVED    EXTRBLE.

                 SUBM    AS          AS          SE          SE          AL          AL          BE          BE
                  ID    MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)          1(1)                    1(1)                    1(0)                    1(1)
          LOW          L.001                   L.001                   1220.                   L.005
         HIGH          L.001                   L.001                   1220.                   L.005
      AVERAGE
     STD.DEV.
  PERCNT:10TH
         25TH
  MEDIAN 50TH
         75TH
         90TH
SECONDARY CODE                                07L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  89                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 20AL05EB3007    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR JUL 05, 1983 TO JUL 05, 1983
CELANESE CANADA LTD EDMONTON             STORM WATER POND GRAB
S17 T53 R23 W4M

                      02061F       10301L       10301F       10151L       10101L       02041L       97160S       97163S
                    TEMPERATURE      PH           PH       ALKALINITY   ALKALINITY    SPECIFIC    DISCHARGE    DISCHARGE
                    OF WATER                                 PHENOL       TOTAL      CONDUCT.     INSTANT       DAILY
                                                           PHTHALEIN                                             MEAN
                SUBM                                         CACO3        CACO3
                 ID     DEG.C       PH UNITS     PH UNITS     MG/L         MG/L         US/CM        M3/S          CFS
SAMPLES(FLAGS)                        1(0)                    1(1)         1(0)         1(0)
           LOW                         7.14                    L.1         125.0        3922.
          HIGH                         7.14                    L.1         125.0        3922.
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                      06201L       06202L       06301L       20103L       20105L       10602L       10604L       97160S
                    BICARBONT.   BICARBONT.   CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS    DISCHARGE
                     (CALCD.)     (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED      TOTAL        TOTAL      INSTANT
                                                                         (CALCD.)     (CALCD.)
                SUBM   HCO3         HCO3         CO3           CA           CA         CACO3        CACO3
                 ID  MG/L           MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         M3/S
SAMPLES(FLAGS)         1(1)         1(0)         1(1)         1(0)                      1(0)
           LOW         Q152.         153.          Q0.        120.0                     419.4
          HIGH         Q152.         153.          Q0.        120.0                     419.4
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                      11103L       12102L       19103L       09107L       17203L       16306L       26009L       26304L
                      SODIUM     MAGNESIUM    POTASSIUM     FLUORIDE     CHLORIDE     SULPHATE      IRON         IRON
                    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL       EXTRBLE.

                SUBM    NA           MG           K            F            CL           SO4          FE           FE
                 ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)         1(0)         1(0)         1(0)         1(0)         1(0)         1(0)
           LOW         790.0         29.1         4.85          .30        99.00       1765.0
          HIGH         790.0         29.1         4.85          .30        99.00       1765.0
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                               05L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  90
                                                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
STATION 20AL05EB3007    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR JUL 05, 1983 TO JUL 05, 1983
CELANESE CANADA LTD EDMONTON                                 INDUSTRIAL MONITORING
S17 T53 R23 W4M                                            STORM WATER POND GRAB

                           07105L      07205L      07562L      07021L      07906L      07905L      15421L      97160S
                          NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN   PHOSPHORUS  DISCHARGE
                          DISSOLVED   DISSOLVED   DISSOLVED    TOTAL     PARTICULATE PARTICULATE   TOTAL       INSTANT
                          NO3 & NO2   NITRITE     AMMONIA     KJELDAHL     TOTAL      (CALCD.)
                   SUBM       N           N           N           N           N           N           P
                    ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)               1(0)        1(0)                    1(0)                                1(0)
           LOW                .048        .010                  12.00                                .560
          HIGH                .048        .010                  12.00                                .560
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE             10L         06L                     15L                                 06L

                           10474L      10407L      10511L      10453L      14101L      97160S      97163S
                          RESIDUE     RESIDUE     RESIDUE     RESIDUE      SILICA    DISCHARGE   DISCHARGE
                           TOTAL    NONFILTRABLE  VOLATILE    FILTRABLE   REACTIVE     INSTANT     DAILY
                                                 NONFILTR.                                         MEAN
                   SUBM                           (CALCD.)                  SIO2
                    ID      MG/L        MG/L        MG/L        MG/L        MG/L        M3/S        CFS
SAMPLES(FLAGS)               1(0)        1(0)                    1(0)        1(0)
           LOW             2920.0        14.0                  2900.0        6.80
          HIGH             2920.0        14.0                  2900.0        6.80
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE             71L         01L                     51L

                           00205L      02074L      06537L      06524L      02001L      16101L      10701L      06608L
                           TOTAL     TURBIDITY    PHENOLIC    OIL AND      ODOUR     SULPHIDE    SURFACT.     CYANIDE
                          DISSOLVED               MATERIAL    GREASE     THRESHOLD   DISSOLVED    N-ALKYL
                           SOLIDS                                         NUMBER                 SULPHNTS.
                   SUBM                            PHENOL                                 S          LAS         CN
                    ID      MG/L        NTU         MG/L        MG/L        TON         MG/L        MG/L        MG/L
SAMPLES(FLAGS)                           1(0)        1(0)        1(0)        1(0)                    1(0)
           LOW                            9.0        .030         1.0          2.                     .09
          HIGH                            9.0        .030         1.0          2.                     .09
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                                 21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE  91                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB3007    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR JUL 05, 1983 TO JUL 05, 1983
CELANESE CANADA LTD EDMONTON              STORM WATER POND GRAB
S17 T53 R23 W4M
                         08304L        08202L        06107L        06154L        06001L        06051L        06006L        06905L
                         OXYGEN        OXYGEN        CARBON        CARBON        CARBON        CARBON        CARBON        CARBON
                           TOTAL       BIOCHEM.     DISSOLVED     DISSOLVED       TOTAL         TOTAL      TOTAL         PARTICULATE
                           COD        DEMAND-BOD     ORGANIC      INORGANIC      ORGANIC      INORGANIC                    TOTAL
               SUBM        02               02          C             C             C             C             C             C
                ID     MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)           1(0)          1(0)                                      1(0)
           LOW           100.          31.0                                      18.3
          HIGH           100.          31.0                                      18.3
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE           01L                                                   05L
                         24101L        24009L        24302L        80015L        80011L        27009L        27302L        47304L
                        CHROMIUM      CHROMIUM      CHROMIUM      MERCURY       MERCURY       COBALT        COBALT        SILVER
                       HEXAVALENT      TOTAL         EXTRBLE.      TOTAL         TOTAL         TOTAL        EXTRBLE.      EXTRBLE.

               SUBM       CR            CR            CR            HG            HG            CO            CO            AG
                ID       MG/L          MG/L          MG/L          MG/L          UG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)           1(0)                        1(1)          1(1)                                      1(1)
           LOW            .003                       L.01          L.0001                                    L.001
          HIGH            .003                       L.01          L.0001                                    L.001
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
                         29009L        29305L        28009L        28302L        48009L        48302L        82009L        82302L
                         COPPER        COPPER        NICKEL        NICKEL        CADMIUM       CADMIUM       LEAD          LEAD
                          TOTAL        EXTRBLE.      TOTAL         EXTRBLE.      TOTAL         EXTRBLE.      TOTAL         EXTRBLE.

               SUBM       CU            CU            NI            NI            CD            CD            PB            PB
                ID       MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)                         1(0)                        1(0)                        1(1)                        1(1)
           LOW                          .005                        .005                       L.001                       L.002
          HIGH                          .005                        .005                       L.001                       L.002
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE  92                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB3007    LAT. 53D 34M 47S  LONG. 113D 21M 50S   PR 3   UTM 12 343500E 5939150N  FOR JUL 05, 1983 TO JUL 05, 1983
CELANESE CANADA LTD EDMONTON              STORM WATER POND GRAB
S17 T53 R23 W4M

                       30009L        30305L        25003L        25304L        23009L        42304L        42009L        51003L
                       ZINC          ZINC          MANGANESE     MANGANESE     VANADIUM      MOLYBDENUM    MOLYBDENUM    ANTIMONY
                       TOTAL         EXTRBLE.      TOTAL         EXTRBLE.      TOTAL         EXTRBLE.      TOTAL         TOTAL

                 SUBM  ZN            ZN            MN            MN            V             MO            MO            SB
                 ID    MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
  SAMPLES(FLAGS)                     1(0)                        1(0)          1(0)
             LOW                     .003                        .17           .001
            HIGH                     .003                        .17           .001
         AVERAGE
        STD.DEV.
     PERCNT:10TH
            25TH
     MEDIAN 50TH
            75TH
            90TH
  SECONDARY CODE                                                               02L

                       33005L        33104L        34005L        34102L        13111L        13306L        04102L        04304L
                       ARSENIC       ARSENIC       SELENIUM      SELENIUM      ALUMINUM      ALUMINUM      BERYLLIUM     BERYLLIUM
                       TOTAL         DISSOLVED     TOTAL         DISSOLVED     DISSOLVED     EXTRBLE.      DISSOLVED     EXTRBLE.

                 SUBM  AS            AS            SE            SE            AL            AL            BE            BE
                 ID    MG/L          MG/L          MG/L          MG/L          UG/L          MG/L          MG/L          MG/L
  SAMPLES(FLAGS)                     1(0)                        1(1)                        1(0)                        1(1)
             LOW                     .0026                       L.0002                      .04                         L.001
            HIGH                     .0026                       L.0002                      .04                         L.001
         AVERAGE
        STD.DEV.
     PERCNT:10TH
            25TH
     MEDIAN 50TH
            75TH
            90TH
  SECONDARY CODE                                                                             02L                         02L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  93                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB3200    LAT. 53D 34M 48S  LONG. 113D 24M  2S   PR 3   UTM 12 341100E 5939250N  FOR MAR 12, 1981 TO MAR 12, 1981
DOMTAR CHEMICALS GROUP EDMONTON           FINAL EFFLUENT GRAB
N S13 T53 R24 W4M

                         02061F        10301L        10301F        10151L        10101L        02041L        97160S        97163S
                       TEMPERATURE       PH            PH        ALKALINITY    ALKALINITY     SPECIFIC     DISCHARGE     DISCHARGE
                       OF WATER                                    PHENOL         TOTAL       CONDUCT.      INSTANT        DAILY
                                                                 PHTHALEIN                                                 MEAN
                  SUBM                                             CACO3         CACO3
                   ID    DEG.C        PH UNITS      PH UNITS       MG/L          MG/L          US/CM         M3/S          CFS
SAMPLES(FLAGS)            1(0)          1(0)          1(0)          1(0)          1(0)          1(0)                       1(0)
           LOW            14.5           6.0           5.5            .0          70.0          451.                      .0129
          HIGH            14.5           6.0           5.5            .0          70.0          451.                      .0129
       AVERAGE
      STD.DEV.
  PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                         06201L        06202L        06301L        20103L        20105L        10602L        10604L        97160S
                       BICARBONT.    BICARBONT.    CARBONATE     CALCIUM       CALCIUM      HARDNESS      HARDNESS      DISCHARGE
                        (CALCD.)      (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED      TOTAL         TOTAL         INSTANT
                                                                               (CALCD.)      (CALCD.)
                  SUBM    HCO3          HCO3          CO3           CA            CA          CACO3         CACO3
                   ID   MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L           M3/S
SAMPLES(FLAGS)            1(0)                        1(0)          1(0)                                      1(0)
           LOW             85.                          0.          27.6                                     112.6
          HIGH             85.                          0.          27.6                                     112.6
       AVERAGE
      STD.DEV.
  PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                              11L

                         11103L        12102L        19103L        09107L        17203L        16306L        26009L        26304L
                         SODIUM       MAGNESIUM     POTASSIUM     FLUORIDE      CHLORIDE      SULPHATE        IRON          IRON
                       DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED       TOTAL        EXTRBLE.

                  SUBM     NA            MG             K             F             CL           SO4            FE            FE
                   ID     MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)            1(0)          1(0)          1(0)          1(0)          1(0)          1(0)          1(0)
           LOW            28.3          10.6           5.6           .17          62.8          42.0          9.84
          HIGH            28.3          10.6           5.6           .17          62.8          42.0          9.84
       AVERAGE
      STD.DEV.
  PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE            11L           11L           11L           06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  94                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                    INDUSTRIAL MONITORING
STATION 20AL05EB3200    LAT. 53D 34M 48S  LONG. 113D 24M  2S   PR 3   UTM 12 341100E 5939250N  FOR MAR 12, 1981 TO MAR 12, 1981
DOMTAR CHEMICALS GROUP EDMONTON           FINAL EFFLUENT GRAB
N S13 T53 R24 W4M

                       07105L        07205L        07562L        07021L        07906L        07905L        15421L        97160S
                      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN     PHOSPHORUS    DISCHARGE
                      DISSOLVED     DISSOLVED     DISSOLVED      TOTAL      PARTICULATE   PARTICULATE      TOTAL        INSTANT
                      NO3 & NO2     NITRITE       AMMONIA       KJELDAHL       TOTAL        (CALCD.)
               SUBM      N             N             N             N             N             N             P
                ID      MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)          1(0)          1(0)          1(0)          1(0)                                      1(0)
           LOW           .03           .03          7.00          7.9                                        .20
          HIGH           .03           .03          7.00          7.9                                        .20
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                     61L           15L                                       19L

                       10474L        10407L        10511L        10453L        14101L        97160S        97163S
                       RESIDUE       RESIDUE       RESIDUE       RESIDUE       SILICA       DISCHARGE     DISCHARGE
                        TOTAL     NONFILTRABLE    VOLATILE     FILTRABLE     REACTIVE       INSTANT        DAILY
                                                  NONFILTR.                                                 MEAN
               SUBM                               (CALCD.)                     SIO2
                ID     MG/L          MG/L          MG/L          MG/L          MG/L          M3/S          CFS
SAMPLES(FLAGS)          1(0)          1(0)                                      1(0)                        1(0)
           LOW         302.0          17.0                                       5.0                        .0129
          HIGH         302.0          17.0                                       5.0                        .0129
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE         71L           01L                                       02L

                       00205L        02074L        06537L        06524L        02001L        16101L        10701L        06608L
                        TOTAL       TURBIDITY      PHENOLIC     OIL AND        ODOUR        SULPHIDE      SURFACT.       CYANIDE
                      DISSOLVED                    MATERIAL     GREASE       THRESHOLD     DISSOLVED      N-ALKYL
                       SOLIDS                                                  NUMBER                     SULPHNTS.
               SUBM                                PHENOL                                       S            LAS           CN
                ID      MG/L          NTU          MG/L          MG/L           TON          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          1(0)                        1(0)          1(0)                                      1(1)
           LOW         262.0                        .060          3.0                                       L.01
          HIGH         262.0                        .060          3.0                                       L.01
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                                   21L
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REQUEST 0007 -  0009 PAGE  95                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB3200     LAT. 53D 34M 48S  LONG. 113D 24M  2S   PR 3   UTM 12 341100E 5939250N  FOR MAR 12, 1981 TO MAR 12, 1981
DOMTAR CHEMICALS GROUP EDMONTON              FINAL EFFLUENT GRAB
N S13 T53 R24 W4M

                           08304L      08202L      06107L      06154L      06001L      06051L      06006L      06905L
                           OXYGEN      OXYGEN      CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                            TOTAL     BIOCHEM.    DISSOLVED   DISSOLVED     TOTAL       TOTAL      TOTAL     PARTICULATE
                             COD     DEMAND-BOD    ORGANIC    INORGANIC    ORGANIC    INORGANIC                 TOTAL
                    SUBM     02           02          C           C           C           C           C           C
                     ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              1(0)                                            1(0)
           LOW             358.0                                           130.8
          HIGH             358.0                                           130.8
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE             01L                                             07L

                           24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                          CHROMIUM    CHROMIUM    CHROMIUM     MERCURY     MERCURY     COBALT      COBALT      SILVER
                         HEXAVALENT     TOTAL      EXTRBLE.     TOTAL       TOTAL       TOTAL     EXTRBLE.    EXTRBLE.

                    SUBM     CR          CR          CR          HG          HG          CO          CO          AG
                     ID    MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              1(1)        1(0)                                1(1)        1(1)                    1(1)
           LOW              L.01         .04                                L.02        L.01                    L.02
          HIGH              L.01         .04                                L.02        L.01                    L.02
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                           29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                           COPPER      COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM      LEAD        LEAD
                            TOTAL     EXTRBLE.      TOTAL     EXTRBLE.      TOTAL     EXTRBLE.     TOTAL     EXTRBLE.

                    SUBM     CU          CU          NI          NI          CD          CD          PB          PB
                     ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              1(0)                    1(1)                    1(1)                                1(1)
           LOW               .01                    L.02                    L.01                                L.02
          HIGH               .01                    L.02                    L.01                                L.02
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE  96                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB3200    LAT. 53D 34M 48S  LONG. 113D 24M  2S   PR 3   UTM 12 341100E 5939250N  FOR MAR 12, 1981 TO MAR 12, 1981
DOMTAR CHEMICALS GROUP EDMONTON           FINAL EFFLUENT GRAB
N S13 T53 R24 W4M

                        30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                         ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                        TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                  SUBM    ZN          ZN          MN          MN          V           MO          MO          SB
                   ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           1(0)                    1(0)                    1(1)                    1(1)        1(0)
           LOW            .04                     .41                    L.01                    L.02        .002
          HIGH            .04                     .41                    L.01                    L.02        .002
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                        33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                        ARSENIC     ARSENIC     SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                       TOTAL      DISSOLVED    TOTAL      DISSOLVED   DISSOLVED    EXTRBLE.   DISSOLVED    EXTRBLE.

                  SUBM    AS          AS          SE          SE          AL          AL          BE          BE
                   ID    MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           1(0)                    1(1)
           LOW           .001                    L.001
          HIGH           .001                    L.001
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                   07L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE  97                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB4800    LAT. 53D 43M 20S  LONG. 113D 14M 39S   PR 3   UTM 12 351950E 5954750N  FOR JUN 16, 1980 TO APR 12, 1984
ALBERTA FOOD PRODUCTS LTD FT SASK.         FINAL EFFLUENT GRAB
RIVER LOTS 16 18 20 MD STURGEON 90

                        02061F       10301L       10301F       10151L       10101L       02041L       97160S       97163S
                      TEMPERATURE      PH           PH       ALKALINITY   ALKALINITY    SPECIFIC    DISCHARGE    DISCHARGE
                       OF WATER                                PHENOL        TOTAL      CONDUCT.     INSTANT       DAILY
                                                             PHTHALEIN                                               MEAN
                 SUBM                                          CACO3        CACO3
                  ID    DEG.C       PH UNITS     PH UNITS      MG/L         MG/L         US/CM        M3/S          CFS
SAMPLES(FLAGS)          16(0)        20(0)        4(0)         20(1)        16(0)        20(0)                     15(0)
           LOW           13.0         4.25         6.4           .0          36.0         252.                      .024
          HIGH           28.5         7.9          7.7          L.1         294.         1835.                      .43
       AVERAGE           21.0                                    .0*        166.9         874.                      .0819
      STD.DEV.            3.5                                    .0*         73.8         456.                      .0975
  PERCNT:10TH            18.0         4.63                       .0          89.          295.                      .04
          25TH           18.8         6.60         6.95          .0         109.0         486.                      .041
   MEDIAN 50TH           21.5         7.40         7.55          .0         172.5         807.                      .063
          75TH           22.0         7.55         7.65          .0         221.5        1257.                      .072
          90TH           26.0         7.70                       .0         267.         1502.                      .075
SECONDARY CODE

                        06201L       06202L       06301L       20103L       20105L       10602L       10604L       97160S
                      BICARBONT.   BICARBONT.   CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS    DISCHARGE
                       (CALCD.)     (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED      TOTAL        TOTAL       INSTANT
                                                                          (CALCD.)     (CALCD.)
                 SUBM   HCO3         HCO3          CO3          CA           CA          CACO3        CACO3
                  ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L          M3/S
SAMPLES(FLAGS)          16(1)        5(0)         16(1)        13(0)        3(0)         12(0)        4(0)
           LOW           44.         112.           0.          22.          43.4         79.6        129.3
          HIGH          358.         312.          Q0.          51.          54.9        205.6        232.
       AVERAGE          203.*        179.           0.*         37.7         50.1        150.7        188.1
      STD.DEV.           90.*         81.           0.*          9.1          6.0         37.7         43.0
  PERCNT:10TH           108.                        0.          26.                      102.0
          25TH          133.         130.           0.          31.                      126.4        160.1
   MEDIAN 50TH          210.         142.           0.          41.          52.0        158.0        195.5
          75TH          270.         201.           0.          44.                      172.9        216.0
          90TH          325.                        0.          48.9                     195.4
SECONDARY CODE                                            11L 10L

                        11103L       12102L       19103L       09107L       17203L       16306L       26009L       26304L
                        SODIUM     MAGNESIUM    POTASSIUM     FLUORIDE     CHLORIDE     SULPHATE      IRON         IRON
                      DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL       EXTRBLE.

                 SUBM    NA           MG            K            F            CL          SO4           FE           FE
                  ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          20(0)        16(0)        16(0)        16(1)        16(0)        20(0)        1(0)         15(1)
           LOW            6.5          6.            .8         L.10          4.8          75.          .48         L.01
          HIGH          360.          23.          91.0         1.83        271.          255.          .48         8.10
       AVERAGE           96.7         14.6         20.01         .912*      101.06        147.8                      .976*
      STD.DEV.           88.1          4.7         23.36         .540*      103.55         60.6                     2.108*
  PERCNT:10TH             7.2          7.5          7.5          .34         15.           81.5                      .09
          25TH           25.3         11.0          8.35         .450        20.05         93.5                      .110
   MEDIAN 50TH           78.5         15.0         12.30         .860        54.00        137.0                      .21
          75TH          130.5         17.4         20.60        1.365       221.50        192.5                      .30
          90TH          206.0         20.          60.0         1.77        270.          240.0                     2.80
SECONDARY CODE          11L          11L          11L          06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE  98                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 20AL05EB4800    LAT. 53D 43M 20S  LONG. 113D 14M 39S   PR 3   UTM 12 351950E 5954750N  FOR JUN 16, 1980 TO APR 12, 1984
ALBERTA FOOD PRODUCTS LTD FT SASK.        FINAL EFFLUENT GRAB
RIVER LOTS 16 18 20 MD STURGEON 90

                      07105L        07205L        07562L        07021L        07906L        07905L        15421L        97160S
                      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      PHOSPHORUS    DISCHARGE
                      DISSOLVED     DISSOLVED     DISSOLVED     TOTAL         PARTICULATE   PARTICULATE   TOTAL         INSTANT
                      NO3 & NO2     NITRITE       AMMONIA       KJELDAHL      TOTAL         (CALCD.)
                SUBM  N             N             N             N             N             N             P
                  ID  MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)        16(3)         16(7)         18(0)         19(0)         13(0)                       18(0)
           LOW        .026          L.020         .200          .900          .07                         .02
          HIGH        18.20         2.00          19.600        54.00         20.25                       8.550
       AVERAGE        1.363*        .258*         9.298         22.612        2.806                       1.470
      STD.DEV.        4.498*        .490*         6.371         15.959        5.343                       2.398
   PERCNT:10TH        L.05          L.05          .890          4.000         .44                         .045
          25TH        .060*         L.050         3.300         10.500        .790                        .195
   MEDIAN 50TH        .200          .080          10.031        16.600        1.1                         .301
          75TH        .250          .205          14.600        36.000        2.02                        1.900
          90TH        1.070         .63           18.070        50.00         3.60                        6.750
SECONDARY CODE        10L           06L           61L           15L                                     06L 19L

                      10474L        10407L        10511L        10453L        14101L        97160S        97163S
                      RESIDUE       RESIDUE       RESIDUE       RESIDUE       SILICA        DISCHARGE     DISCHARGE
                      TOTAL         NONFILTRABLE  VOLATILE      FILTRABLE     REACTIVE      INSTANT       DAILY
                                                  NONFILTR.                                             MEAN
                SUBM                              (CALCD.)                    SIO2
                  ID  MG/L          MG/L          MG/L          MG/L          MG/L          M3/S          CFS
SAMPLES(FLAGS)        16(0)         20(0)         4(0)          19(0)         16(0)                       15(0)
           LOW        210.0         8.0           2.4           153.          2.0                         .024
          HIGH        1252.         522.          110.0         1110.         13.5                        .43
       AVERAGE        704.6         61.0          33.3          568.1         5.37                        .0819
      STD.DEV.        274.7         113.4         31.3          270.4         3.07                        .0975
   PERCNT:10TH        436.          11.0                        158.          2.1                         .04
          25TH        538.0         15.4          5.2           420.          3.35                        .041
   MEDIAN 50TH        662.5         28.5          10.5          530.          4.80                        .063
          75TH        854.0         50.0          61.5          740.0         6.45                        .072
          90TH        1164.         119.0                       950.          9.8                         .075
SECONDARY CODE        71L           01L                         51L           02L

                      00205L        02074L        06537L        06524L        02001L        16101L        10701L        06608L
                      TOTAL         TURBIDITY     PHENOLIC      OIL AND       ODOUR         SULPHIDE      SURFACT.      CYANIDE
                      DISSOLVED                   MATERIAL      GREASE        THRESHOLD     DISSOLVED     N-ALKYL
                      SOLIDS                                                  NUMBER                      SULPHNTS.
                SUBM                              PHENOL                                    S             LAS           CN
                  ID  MG/L          NTU           MG/L          MG/L          TON           MG/L          MG/L          MG/L
SAMPLES(FLAGS)        15(0)         1(0)          13(2)         20(2)         13(0)         6(1)                        4(0)
           LOW        207.4         15.0          L.002         0.            1.            L.01                        .006
          HIGH        1049.         15.0          .127          68.1          1000.         2.40                        .261
       AVERAGE        555.7                       .024*         5.760*        106.          .488*                       .0933
      STD.DEV.        209.2                       .034*         15.635*       271.          .940*                       .1160
   PERCNT:10TH        350.                        L.002         .450          4.
          25TH        414.                        .007          .750          10.           .06                         .0165
   MEDIAN 50TH        544.                        .014          1.150         16.           .110                        .0530
          75TH        660.5                       .018          1.950         64.           .24                         .1700
          90TH        820.                        .049          14.100        100.
SECONDARY CODE                                                  21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 - 0009 PAGE 99

NAQUADAT SUMMARY REPORT JAN 08, 1986
INDUSTRIAL MONITORING

STATION 20AL05EB4800 LAT. 53D 43M 20S LONG. 113D 14M 39S PR 3 UTM 12 351950E 5954750N FOR JUN 16, 1980 TO APR 12, 1984
ALBERTA FOOD PRODUCTS LTD FT SASK. FINAL EFFLUENT GRAB
RIVER LOTS 16 18 20 MD STURGEON 90

SUBM ID	08304L OXYGEN TOTAL COD 02 MG/L	08202L OXYGEN BIOCHEM. DEMAND-BOD 02 MG/L	06107L CARBON DISSOLVED ORGANIC C MG/L	06154L CARBON DISSOLVED INORGANIC C MG/L	06001L CARBON TOTAL ORGANIC C MG/L	06051L CARBON TOTAL INORGANIC C MG/L	06006L CARBON TOTAL C MG/L	06905L CARBON PARTICULATE TOTAL C MG/L
SAMPLES(FLAGS)	19(0)	20(0)	13(0)	13(0)	7(0)	1(0)	1(0)	13(0)
LOW	18.4	3.6	1.	23.0	10.9	60.	245.	1.49
HIGH	943.0	542.0	110.0	77.	185.	60.	245.	222.00
AVERAGE	236.2	130.41	21.65	47.90	110.66			24.87
STD.DEV.	263.5	173.49	28.36	15.93	52.91			59.63
PERCNT:10TH	38.9	6.90	3.6	26.0				1.50
25TH	55.4	15.15	7.	34.0	100.0			5.13
MEDIAN 50TH	118.4	29.65	17.	47.	110.7			6.72
75TH	440.	209.50	21.	59.4	145.0			12.50
90TH	720.0	447.00	38.0	61.				26.00
SECONDARY CODE	01L				05L 07L			

SUBM ID	24101L CHROMIUM HEXAVALENT CR MG/L	24009L CHROMIUM TOTAL CR MG/L	24302L CHROMIUM EXTRBLE. CR MG/L	80015L MERCURY TOTAL HG MG/L	80011L MERCURY TOTAL HG UG/L	27009L COBALT TOTAL CO MG/L	27302L COBALT EXTRBLE. CO MG/L	47304L SILVER EXTRBLE. AG MG/L
SAMPLES(FLAGS)	2(2)	14(1)	1(1)	13(12)		14(5)	1(1)	1(1)
LOW	L.001	L.001	L.01	.0001		L.001	L.001	L.2
HIGH	L.001	.021	L.01	L.0001		.01	L.001	L.2
AVERAGE		.007*		.0001*		.003*		
STD.DEV.		.005*		.0000*		.003*		
PERCNT:10TH		.003		L.0001		L.001		
25TH		.005		L.0001		L.001		
MEDIAN 50TH	L.001	.006		L.0001		.003		
75TH		.008		L.0001		.004		
90TH		.01		L.0001		.008		
SECONDARY CODE								

SUBM ID	29009L COPPER TOTAL CU MG/L	29305L COPPER EXTRBLE. CU MG/L	28009L NICKEL TOTAL NI MG/L	28302L NICKEL EXTRBLE. NI MG/L	48009L CADMIUM TOTAL CD MG/L	48302L CADMIUM EXTRBLE. CD MG/L	82009L LEAD TOTAL PB MG/L	82302L LEAD EXTRBLE. PB MG/L
SAMPLES(FLAGS)	14(1)	1(0)	14(5)	1(1)	14(12)	1(1)	8(5)	6(3)
LOW	L.001	.010	L.001	L.001	L.001	L.001	L.003	L.002
HIGH	.049	.010	.110	L.001	L.01	L.001	.011	.034
AVERAGE	.013*		.015*		.002*		.004*	.011*
STD.DEV.	.012*		.028*		.002*		.003*	.013*
PERCNT:10TH	.003		L.001		L.001			
25TH	.006		L.001		L.001		L.003	L.003
MEDIAN 50TH	.011		.007		L.001		L.003	.005
75TH	.016		.014		L.001		.005	L.02
90TH	.023		L.02		.004			
SECONDARY CODE								

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0010 -  0012 PAGE 100                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB4800    LAT. 53D 43M 20S  LONG. 113D 14M 39S   PR 3   UTM 12 351950E 5954750N  FOR FEB 04, 1981 TO APR 12, 1984
ALBERTA FOOD PRODUCTS LTD FT SASK.         FINAL EFFLUENT GRAB
RIVER LOTS 16 18 20 MD STURGEON 90

                          30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                           ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                          TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                  SUBM     ZN          ZN          MN          MN          V           MO          MO          SB
                   ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            14(0)       1(0)        14(0)       1(0)        12(3)                   13(7)
           LOW             .004        .003        .01        7.87        L.002                   L.001
          HIGH             .071        .003       8.450       7.87         .016                   L.02
       AVERAGE             .023                   1.590                    .005*                   .006*
      STD.DEV.             .020                   2.197                    .004*                   .007*
   PERCNT:10TH             .004                    .017                   L.002                   L.001
          25TH             .005                    .155                    .002*                  L.001
   MEDIAN 50TH             .023                   1.225                    .004                    .004
          75TH             .033                   1.680                    .006                    .006
          90TH             .046                   3.510                    .007                    .019
SECONDARY CODE

                          33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                          ARSENIC     ARSENIC    SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                          TOTAL      DISSOLVED   TOTAL       DISSOLVED   DISSOLVED   EXTRBLE.   DISSOLVED    EXTRBLE.

                  SUBM     AS          AS          SE          SE          AL          AL          BE          BE
                   ID     MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            7(0)                    7(7)                                12(0)                   12(12)
           LOW            .0004                  L.0002                                .069                    L.001
          HIGH            .0054                  L.0002                              19.620                    L.001
       AVERAGE            .0029                                                       2.890
      STD.DEV.            .0022                                                       5.657
   PERCNT:10TH                                                                         .116                    L.001
          25TH            .0006                  L.0002                                .143                    L.001
   MEDIAN 50TH            .0034                  L.0002                                .307                    L.001
          75TH            .0051                  L.0002                               3.255                    L.001
          90TH                                                                        6.360                    L.001
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 101                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 20AL05EB4801    LAT. 53D 43M 20S  LONG. 113D 14M 39S   PR 3   UTM 12 351950E 5954750N  FOR NOV 04, 1980 TO SEP 22, 1982
ALBERTA FOOD PRODUCTS LTD FT SASK           FINAL EFFLUENT COMP
RIVER LOTS 16 18 20 MD STURGEON 90

                        02061F        10301L       10301F        10151L       10101L       02041L       97160S        971633
                     TEMPERATURE        PH           PH        ALKALINITY   ALKALINITY    SPECIFIC     DISCHARGE     DISCHARGE
                      OF WATER                                   PHENOL       TOTAL       CONDUCT.      INSTANT        DAILY
                 SUBM                                          PHTHALEIN                                               MEAN
                 ID     DEG.C        PH UNITS     PH UNITS       CACO3        CACO3
SAMPLES(FLAGS)                         5(0)         1(0)         MG/L         MG/L        US/CM         M3/S          CFS
           LOW                         4.60         8.2          3(0)         3(0)        5(0)                        3(0)
          HIGH                         7.8          8.2           .0          181.         268.                         .04
       AVERAGE                                                    .0          214.        1347.                         .074
      STD.DEV.                                                    .0          201.0        704.                         .0620
   PERCNT:10TH                                                    .0           17.6        439.                         .0191
          25TH                         4.61
   MEDIAN 50TH                         7.6                                                 315.
          75TH                         7.6                        .0          208.         782.                         .072
          90TH                                                                             807.
SECONDARY CODE

                        06201L        06202L       06301L       20103L       20105L       10602L       10604L        97160S
                      BICARBONT.    BICARBONT.    CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS      DISCHARGE
                       (CALCD.)      (CALCD.)     (CALCD.)     DISSOLVED    DISSOLVED      TOTAL        TOTAL        INSTANT
                                                                            (CALCD.)     (CALCD.)
                 SUBM   HCO3          HCO3          CO3           CA           CA          CACO3        CACO3
                 ID     MG/L          MG/L          MG/L          MG/L         MG/L        MG/L         MG/L          M3/S
SAMPLES(FLAGS)            3(0)                      3(0)          2(0)         1(0)        2(0)         1(0)
           LOW            221.                       0.           42.          50.1        166.6        216.
          HIGH            261.                       0.           45.          50.1        170.0        216.
       AVERAGE            245.                       0.           43.5                     168.3
      STD.DEV.             21.                       0.            2.1                       2.4
   PERCNT:10TH
          25TH
   MEDIAN 50TH            254.                       0.           43.5                     168.3
          75TH
          90TH
SECONDARY CODE
                                                                10L
                        11103L        12102L       19103L       09107L       17203L       16306L       26009L        26304L
                        SODIUM       MAGNESIUM    POTASSIUM    FLUORIDE     CHLORIDE     SULPHATE       IRON          IRON
                      DISSOLVED     DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL        EXTRBLE.

                 SUBM     NA            MG            K            F            CL          SO4          FE            FE
                 ID     MG/L          MG/L          MG/L         MG/L         MG/L         MG/L         MG/L          MG/L
SAMPLES(FLAGS)           5(0)          3(0)          3(0)         3(0)         3(0)         5(0)                       3(0)
           LOW            7.8           14.           8.5          .32          42.          70.                        .13
          HIGH          152.            22.          12.9         1.77         234.         130.0                       .17
       AVERAGE           60.3           17.0         10.03         .897        112.33        98.6                       .150
      STD.DEV.           58.7            4.4          2.48         .769        105.79        21.7                       .020
   PERCNT:10TH
          25TH            9.9                                                               93.
   MEDIAN 50TH           66.            15.           8.7          .60          61.          95.                        .15
          75TH           66.                                                               105.0
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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NAQUADAT SUMMARY REPORT JAN 08, 1986
INDUSTRIAL MONITORING

STATION 20AL05EB4801 LAT. 53D 43M 20S LONG. 113D 14M 39S PR 3 UTM 12 351950E 5954750N FOR NOV 04, 1980 TO SEP 22, 1982
ALBERTA FOOD PRODUCTS LTD FT SASK FINAL EFFLUENT COMP
RIVER LOTS 16 18 20 MD STURGEON 90

	SUBM ID	07105L NITROGEN DISSOLVED NO3 & NO2	07205L NITROGEN DISSOLVED NITRITE	07562L NITROGEN DISSOLVED AMMONIA	07021L NITROGEN TOTAL KJELDAHL	07906L NITROGEN PARTICULATE TOTAL	07905L NITROGEN PARTICULATE (CALCD.)	15421L PHOSPHORUS TOTAL	97160S DISCHARGE INSTANT
		N	N	N	N	N	N	P	
		MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	M3/S
SAMPLES(FLAGS)		3(0)	3(0)	4(0)	4(0)	3(0)		4(0)	
LOW		.10	.07	4.10	17.0	.91		.095	
HIGH		.90	.85	17.380	50.00	2.7		2.350	
AVERAGE		.383	.347	12.352	26.844	1.573		1.115	
STD.DEV.		.448	.437	5.999	15.529	.981		1.077	
PERCNT:10TH									
25TH				7.950	18.125			.218	
MEDIAN 50TH		.15	.12	13.965	20.188	1.11		1.008	
75TH				16.755	35.563			2.012	
90TH									
SECONDARY CODE				61L	15L			06L 19L	

	SUBM ID	10474L RESIDUE TOTAL	10407L RESIDUE NONFILTRABLE	10511L RESIDUE VOLATILE NONFILTR. (CALCD.)	10453L RESIDUE FILTRABLE	14101L SILICA REACTIVE	97160S DISCHARGE INSTANT	97163S DISCHARGE DAILY MEAN
						SIO2		
		MG/L	MG/L	MG/L	MG/L	MG/L	M3/S	CFS
SAMPLES(FLAGS)		3(0)	5(0)	2(0)	5(0)	3(0)		3(0)
LOW		420.	10.	14.4	162.	3.8		.04
HIGH		873.	44.	27.0	830.	8.2		.074
AVERAGE		598.0	22.7	20.7	416.6	5.40		.0620
STD.DEV.		241.6	15.4	8.9	270.2	2.43		.0191
PERCNT:10TH								
25TH			11.		191.			
MEDIAN 50TH		501.	14.4	20.7	410.	4.2		.072
75TH			34.0		490.			
90TH								
SECONDARY CODE			01L		51L	02L		

	SUBM ID	00205L TOTAL DISSOLVED SOLIDS	02074L TURBIDITY	06537L PHENOLIC MATERIAL	06524L OIL AND GREASE	02001L ODOUR THRESHOLD NUMBER	16101L SULPHIDE DISSOLVED	10701L SURFACT. N-ALKYL SULPHNTS.	06608L CYANIDE
				PHENOL			S	LAS	CN
		MG/L	NTU	MG/L	MG/L	TON	MG/L	MG/L	MG/L
SAMPLES(FLAGS)		3(0)		3(0)	5(0)	4(0)			
LOW		369.		.003	.5	10.			
HIGH		674.		.015	3.	32.			
AVERAGE		488.3		.011	1.640	21.			
STD.DEV.		163.0		.007	.929	13.			
PERCNT:10TH									
25TH					1.3	10.			
MEDIAN 50TH		422.		.014	1.4	21.			
75TH					2.	32.			
90TH									
SECONDARY CODE					21L				

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REQUEST 0007 -  0009 PAGE 103                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                        INDUSTRIAL MONITORING
STATION 20AL05EB4801     LAT. 53D 43M 20S  LONG. 113D 14M 39S   PR 3   UTM 12 351950E 5954750N  FOR NOV 04, 1980 TO SEP 22, 1982
ALBERTA FOOD PRODUCTS LTD FT SASK          FINAL EFFLUENT COMP
RIVER LOTS 16 18 20 MD STURGEON 90

                                  08304L        08202L        06107L        06154L        06001L        06051L        06006L        06905L
                                  OXYGEN        OXYGEN        CARBON        CARBON        CARBON        CARBON        CARBON        CARBON
                                  TOTAL         BIOCHEM.      DISSOLVED     DISSOLVED     TOTAL         TOTAL         TOTAL         PARTICULATE
                                  COD           DEMAND-BOD    ORGANIC       INORGANIC     ORGANIC       INORGANIC                   TOTAL
                            SUBM  02            02            C             C             C             C             C             C
                            ID    MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
              SAMPLES(FLAGS)      4(0)          5(0)          3(0)          3(0)          2(0)                                      3(0)
                         LOW      57.5          10.9          8.            53.           110.0                                     4.38
                        HIGH      390.          214.0         19.           57.           133.0                                     16.
                     AVERAGE      148.1         89.68         14.67         55.33         121.50                                    8.70
                    STD.DEV.      161.5         102.50        5.86          2.08          16.26                                     6.36
                 PERCNT:10TH
                        25TH      62.0          16.0
                 MEDIAN 50TH      72.5          18.5          17.           56.           121.50                                    5.71
                        75TH      234.3         189.0
                        90TH
              SECONDARY CODE                                                              05L

                                  24101L        24009L        24302L        80015L        80011L        27009L        27302L        47304L
                                  CHROMIUM      CHROMIUM      CHROMIUM      MERCURY       MERCURY       COBALT        COBALT        SILVER
                                  HEXAVALENT    TOTAL         EXTRBLE.      TOTAL         TOTAL         TOTAL         EXTRBLE.      EXTRBLE.

                            SUBM  CR            CR            CR            HG            HG            CO            CO            AG
                            ID    MG/L          MG/L          MG/L          MG/L          UG/L          MG/L          MG/L          MG/L
              SAMPLES(FLAGS)                    2(0)                        2(2)                        2(0)
                         LOW                    .008                        L.0001                      .003
                        HIGH                    .009                        L.0001                      .003
                     AVERAGE                    .009                                                    .003
                    STD.DEV.                    .001                                                    .000
                 PERCNT:10TH
                        25TH
                 MEDIAN 50TH                    .009                        L.0001                      .003
                        75TH
                        90TH
              SECONDARY CODE

                                  29009L        29305L        28009L        28302L        48009L        48302L        82009L        82302L
                                  COPPER        COPPER        NICKEL        NICKEL        CADMIUM       CADMIUM       LEAD          LEAD
                                  TOTAL         EXTRBLE.      TOTAL         EXTRBLE.      TOTAL         EXTRBLE.      TOTAL         EXTRBLE.

                            SUBM  CU            CU            NI            NI            CD            CD            PB            PB
                            ID    MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
              SAMPLES(FLAGS)      2(0)                        2(0)                        2(2)                        2(2)
                         LOW      .012                        .011                        L.001                       L.003
                        HIGH      .017                        .013                        L.001                       L.003
                     AVERAGE      .015                        .012
                    STD.DEV.      .004                        .001
                 PERCNT:10TH
                        25TH
                 MEDIAN 50TH      .015                        .012                        L.001                       L.003
                        75TH
                        90TH
              SECONDARY CODE
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                                         NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                          INDUSTRIAL MONITORING
STATION 20AL05EB4801    LAT. 53D 43M 20S  LONG. 113D 14M 39S   PR 3   UTM 12 351950E 5954750N  FOR SEP 21, 1982 TO SEP 22, 1982
ALBERTA FOOD PRODUCTS LTD FT SASK         FINAL EFFLUENT COMP
RIVER LOTS 16 18 20 MD STURGEON 90

                        30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                         ZINC        ZINC     MANGANESE   MANGANESE    VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                         TOTAL     EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                 SUBM     ZN          ZN          MN          MN          V           MO          MO          SB
                  ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           2(0)                    2(0)                    2(0)                    2(2)
           LOW           .077                   1.480                    .003                    L.001
          HIGH           .104                   1.570                    .003                    L.001
       AVERAGE           .091                   1.525                    .003
      STD.DEV.           .019                    .064                    .000
  PERCNT:10TH
          25TH
   MEDIAN 50TH           .091                   1.525                    .003                    L.001
          75TH
          90TH
SECONDARY CODE

                        33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                        ARSENIC     ARSENIC    SELENIUM    SELENIUM    ALUMINUM    ALUMINUM    BERYLLIUM   BERYLLIUM
                        TOTAL      DISSOLVED   TOTAL       DISSOLVED   DISSOLVED   EXTRBLE.    DISSOLVED    EXTRBLE.

                 SUBM     AS          AS          SE          SE          AL          AL          BE          BE
                  ID     MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)                                                                       2(0)                    2(2)
           LOW                                                                       .026                    L.001
          HIGH                                                                       .073                    L.001
       AVERAGE                                                                       .050
      STD.DEV.                                                                       .033
  PERCNT:10TH
          25TH
   MEDIAN 50TH                                                                       .050                    L.001
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 105                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB4803    LAT. 53D 43M 20S  LONG. 113D 14M 39S   PR 3   UTM 12 351950E 5954750N  FOR OCT 06, 1983 TO OCT 06, 1983
ALBERTA FOOD PRODUCTS LTD. FT SASK.       INLET TO WATER TREATMENT PLAN GRAB

                       02061F        10301L        10301F        10151L        10101L        02041L        97160S        97163S
                    TEMPERATURE        PH            PH        ALKALINITY    ALKALINITY     SPECIFIC     DISCHARGE     DISCHARGE
                    OF WATER                                     PHENOL         TOTAL       CONDUCT.       INSTANT        DAILY
                                                                PHTHALEIN                                                 MEAN
               SUBM                                               CACO3         CACO3
                ID     DEG.C        PH UNITS      PH UNITS        MG/L          MG/L          US/CM         M3/S           CFS
SAMPLES(FLAGS)           1(0)          1(0)                        1(0)          1(0)          1(0)
           LOW           28.0           6.5                          .0          270.          1012.
          HIGH           28.0           6.5                          .0          270.          1012.
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                       06201L        06202L        06301L        20103L        20105L        10602L        10604L        97160S
                     BICARBONT.    BICARBONT.     CARBONATE       CALCIUM       CALCIUM       HARDNESS      HARDNESS     DISCHARGE
                       (CALCD.)      (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED       TOTAL         TOTAL        INSTANT
                                                                               (CALCD.)      (CALCD.)
               SUBM    HCO3           HCO3          CO3            CA            CA         CACO3         CACO3
                ID   MG/L             MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)           1(0)          1(0)          1(0)          1(0)                        1(0)
           LOW            329.          329.           0.            7.                         50.4
          HIGH            329.          329.           0.            7.                         50.4
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                                   10L
                       11103L        12102L        19103L        09107L        17203L        16306L        26009L        26304L
                       SODIUM      MAGNESIUM     POTASSIUM      FLUORIDE      CHLORIDE      SULPHATE         IRON          IRON
                     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED       TOTAL         EXTRBLE.

               SUBM     NA            MG             K             F             CL           S04           FE            FE
                ID      MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)           1(0)          1(0)          1(0)          1(0)          1(0)          1(0)                        1(0)
           LOW           189.            8.         17.0           .98         69.           135.                        6.50
          HIGH           189.            8.         17.0           .98         69.           135.                        6.50
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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                                  NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                    INDUSTRIAL MONITORING
STATION 20AL05EB4803    LAT. 53D 43M 20S  LONG. 113D 14M 39S   PR 3   UTM 12 351950E 5954750N  FOR OCT 06, 1983 TO OCT 06, 1983
ALBERTA FOOD PRODUCTS LTD. FT SASK.       INLET TO WATER TREATMENT PLAN GRAB

                    07105L        07205L        07562L        07021L        07906L        07905L        15421L        97160S
                    NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      PHOSPHORUS    DISCHARGE
                    DISSOLVED     DISSOLVED     DISSOLVED     TOTAL         PARTICULATE   PARTICULATE   TOTAL         INSTANT
                    NO3 & NO2     NITRITE       AMMONIA       KJELDAHL      TOTAL         (CALCD.)
               SUBM N             N             N             N             N             N             P
               ID   MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)      1(1)          1(1)          1(0)          1(0)          1(0)                        1(0)
           LOW      L.05          L.05          3.660         22.000        5.55                        31.000
          HIGH      L.05          L.05          3.660         22.000        5.55                        31.000
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                    10474L        10407L        10511L        10453L        14101L        97160S        97163S
                    RESIDUE       RESIDUE       RESIDUE       RESIDUE       SILICA        DISCHARGE     DISCHARGE
                    TOTAL         NONFILTRABLE  VOLATILE      FILTRABLE     REACTIVE      INSTANT       DAILY
                                                NONFILTR.                                               MEAN
               SUBM                             (CALCD.)                    SIO2
               ID   MG/L          MG/L          MG/L          MG/L          MG/L          M3/S          CFS
SAMPLES(FLAGS)      1(0)          1(0)                        1(0)          1(0)
           LOW      1751.         941.                        810.          8.3
          HIGH      1751.         941.                        810.          8.3
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                                              02L

                    00205L        02074L        06537L        06524L        02001L        16101L        10701L        06608L
                    TOTAL         TURBIDITY     PHENOLIC      OIL AND       ODOUR         SULPHIDE      SURFACT.      CYANIDE
                    DISSOLVED                   MATERIAL      GREASE        THRESHOLD     DISSOLVED     N-ALKYL
                    SOLIDS                                                  NUMBER                      SULPHNTS.
               SUBM                             PHENOL                                    S             LAS           CN
               ID   MG/L          NTU           MG/L          MG/L          TON           MG/L          MG/L          MG/L
SAMPLES(FLAGS)      1(0)                        1(0)          1(0)
           LOW      587.                        .351          438.5
          HIGH      587.                        .351          438.5
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE 107                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB4803    LAT. 53D 43M 20S  LONG. 113D 14M 39S   PR 3   UTM 12 351950E 5954750N  FOR OCT 06, 1983 TO OCT 06, 1983
ALBERTA FOOD PRODUCTS LTD. FT SASK.         INLET TO WATER TREATMENT PLAN GRAB

                           08304L      08202L      06107L      06154L      06001L      06051L      06006L      06905L
                           OXYGEN      OXYGEN      CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                            TOTAL     BIOCHEM.    DISSOLVED   DISSOLVED     TOTAL       TOTAL     TOTAL      PARTICULATE
                             COD     DEMAND-BOD    ORGANIC    INORGANIC    ORGANIC    INORGANIC               TOTAL
                   SUBM      O2          O2          C           C           C           C           C           C
                    ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              1(0)        1(0)        1(0)        1(0)                                            1(0)
           LOW            2966.5      1680.0      452.0        50.9                                           207.90
          HIGH            2966.5      1680.0      452.0        50.9                                           207.90
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
    MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                           24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                          CHROMIUM    CHROMIUM    CHROMIUM     MERCURY     MERCURY     COBALT      COBALT      SILVER
                         HEXAVALENT    TOTAL       EXTRBLE.     TOTAL       TOTAL       TOTAL      EXTRBLE.    EXTRBLE.

                   SUBM      CR          CR          CR          HG          HG          CO          CO          AG
                    ID     MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)                          1(0)                    1(1)                    1(0)
           LOW                          .012                  L.0001                    .005
          HIGH                          .012                  L.0001                    .005
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
    MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                           29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                           COPPER      COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM      LEAD        LEAD
                            TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.

                   SUBM      CU          CU          NI          NI          CD          CD          PB          PB
                    ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              1(0)                    1(0)                    1(1)                                1(0)
           LOW              .067                    .012                   L.001                                .035
          HIGH              .067                    .012                   L.001                                .035
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
    MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE 108                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                         INDUSTRIAL MONITORING
STATION 20AL05EB4803    LAT. 53D 43M 20S  LONG. 113D 14M 39S   PR 3   UTM 12 351950E 5954750N  FOR OCT 06, 1983 TO OCT 06, 1983
ALBERTA FOOD PRODUCTS LTD. FT SASK.       INLET TO WATER TREATMENT PLAN GRAB

                           30009L      30305L     25003L      25304L     23009L     42304L     42009L     51003L
                            ZINC        ZINC     MANGANESE   MANGANESE  VANADIUM  MOLYBDENUM MOLYBDENUM  ANTIMONY
                           TOTAL      EXTRBLE.    TOTAL      EXTRBLE.    TOTAL     EXTRBLE.    TOTAL      TOTAL

                  SUBM      ZN          ZN         MN          MN          V          MO         MO         SB
                   ID      MG/L        MG/L       MG/L        MG/L       MG/L        MG/L       MG/L       MG/L
SAMPLES(FLAGS)              1(0)                   1(0)                   1(0)                   1(0)
           LOW               .082                  3.650                   .006                   .009
          HIGH               .082                  3.650                   .006                   .009
       AVERAGE
      STD.DEV.
  PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                           33005L      33104L     34005L      34102L     13111L     13306L     04102L     04304L
                           ARSENIC     ARSENIC    SELENIUM    SELENIUM   ALUMINUM   ALUMINUM  BERYLLIUM  BERYLLIUM
                          TOTAL      DISSOLVED   TOTAL       DISSOLVED  DISSOLVED   EXTRBLE.  DISSOLVED   EXTRBLE.

                  SUBM      AS          AS         SE          SE         AL         AL         BE         BE
                   ID      MG/L        MG/L       MG/L        MG/L       UG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)             1(0)                   1(1)                              1(0)                  1(1)
           LOW             .0064                  L.0002                            1.530                 L.001
          HIGH             .0064                  L.0002                            1.530                 L.001
       AVERAGE
      STD.DEV.
  PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 109                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB5500    LAT. 53D 43M 11S  LONG. 113D 10M 44S   PR 3   UTM 12 356250E 5954300N  FOR APR 28, 1980 TO APR 28, 1980
JOHNS MANVILLE CANADA INC. FT SASK.        FINAL EFFLUENT GRAB
53 T55 R22 W4M

                          02061F      10301L      10301F      10151L      10101L      02041L      97160S      97163S
                        TEMPERATURE     PH          PH      ALKALINITY  ALKALINITY   SPECIFIC   DISCHARGE   DISCHARGE
                        OF WATER                              PHENOL       TOTAL     CONDUCT.    INSTANT      DAILY
                                                            PHTHALEIN                                          MEAN
                 SUBM                                         CACO3       CACO3
                  ID     DEG.C      PH UNITS    PH UNITS      MG/L        MG/L       US/CM        M3/S         CFS
SAMPLES(FLAGS)            1(0)        1(0)                    1(0)        1(0)        1(0)
           LOW            16.0         8.1                      .0        122.        462.
          HIGH            16.0         8.1                      .0        122.        462.
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                          06201L      06202L      06301L      20103L      20105L      10602L      10604L      97160S
                        BICARBONT.  BICARBONT.  CARBONATE    CALCIUM     CALCIUM    HARDNESS    HARDNESS   DISCHARGE
                          (CALCD.)    (CALCD.)    (CALCD.)   DISSOLVED   DISSOLVED     TOTAL       TOTAL      INSTANT
                                                                         (CALCD.)    (CALCD.)
                 SUBM    HCO3         HCO3        CO3          CA          CA         CACO3       CACO3
                  ID    MG/L          MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)            1(0)                    1(0)                    1(0)                    1(0)
           LOW            149.                      0.                    38.0                    161.
          HIGH            149.                      0.                    38.0                    161.
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                          11103L      12102L      19103L      09107L      17203L      16306L      26009L      26304L
                          SODIUM    MAGNESIUM   POTASSIUM    FLUORIDE    CHLORIDE    SULPHATE      IRON        IRON
                        DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED     TOTAL      EXTRBLE.

                 SUBM      NA          MG          K           F           CL         SO4          FE          FE
                  ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            1(0)        1(0)        1(0)        1(0)        1(0)        1(0)                    1(0)
           LOW             22.         16.         4.3         .98         20.         78.                     .16
          HIGH             22.         16.         4.3         .98         20.         78.                     .16
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 110                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB5500    LAT. 53D 43M 11S  LONG. 113D 10M 44S   PR 3   UTM 12 356250E 5954300N  FOR APR 28, 1980 TO APR 28, 1980
JOHNS MANVILLE CANADA INC. FT SASK.       FINAL EFFLUENT GRAB
S3 T55 R22 W4M

                      07105L        07205L        07562L        07021L        07906L        07905L        15421L        97160S
                     NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN     PHOSPHORUS    DISCHARGE
                     DISSOLVED     DISSOLVED     DISSOLVED      TOTAL      PARTICULATE   PARTICULATE     TOTAL        INSTANT
                     NO3 & NO2      NITRITE      AMMONIA       KJELDAHL       TOTAL        (CALCD.)
                SUBM     N             N             N             N             N             N             P
                 ID     MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)          1(0)          1(0)          1(0)          1(0)                                      1(0)
           LOW           .55           .08          1.680        11.290                                     1.694
          HIGH           .55           .08          1.680        11.290                                     1.694
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                      61L           15L                                       19L

                       10474L        10407L        10511L        10453L        14101L        97160S        97163S
                       RESIDUE       RESIDUE       RESIDUE       RESIDUE       SILICA       DISCHARGE     DISCHARGE
                        TOTAL      NONFILTRABLE    VOLATILE     FILTRABLE     REACTIVE       INSTANT        DAILY
                                                  NONFILTR.                                                  MEAN
                SUBM                              (CALCD.)                      SIO2
                 ID     MG/L          MG/L          MG/L          MG/L          MG/L          M3/S           CFS
SAMPLES(FLAGS)          1(0)          1(0)                                      1(0)
           LOW          397.            7.                                       4.8
          HIGH          397.            7.                                       4.8
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                                                  02L

                       00205L        02074L        06537L        06524L        02001L        16101L        10701L        06608L
                        TOTAL       TURBIDITY      PHENOLIC      OIL AND       ODOUR        SULPHIDE       SURFACT.       CYANIDE
                      DISSOLVED                    MATERIAL      GREASE      THRESHOLD     DISSOLVED      N-ALKYL
                        SOLIDS                                                 NUMBER                     SULPHNTS.
                SUBM                                PHENOL                                     S             LAS           CN
                 ID     MG/L          NTU           MG/L          MG/L           TON          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          1(0)          1(0)          1(0)          1(0)                                      1(0)
           LOW          254.           5.4          .014           1.1                                       .82
          HIGH          254.           5.4          .014           1.1                                       .82
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                73L
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REQUEST 0007 -  0009 PAGE 111                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 20AL05EB5500    LAT. 53D 43M 11S  LONG. 113D 10M 44S   PR 3   UTM 12 356250E 5954300N  FOR APR 28, 1980 TO APR 28, 1980
JOHNS MANVILLE CANADA INC. FT SASK.       FINAL EFFLUENT GRAB
S3 T55 R22 W4M
                       08304L       08202L       06107L       06154L       06001L       06051L       06006L       06905L
                       OXYGEN       OXYGEN       CARBON       CARBON       CARBON       CARBON       CARBON       CARBON
                        TOTAL      BIOCHEM.    DISSOLVED    DISSOLVED      TOTAL        TOTAL      TOTAL      PARTICULATE
                         COD      DEMAND-BOD    ORGANIC     INORGANIC     ORGANIC     INORGANIC                  TOTAL
                 SUBM    02           02          C            C            C            C            C            C
                  ID    MG/L         MG/L        MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)           1(0)                                              1(0)         1(0)         1(0)
           LOW           68.0                                              14.          26.          40.
          HIGH           68.0                                              14.          26.          40.
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
                       24101L       24009L       24302L       80015L       80011L       27009L       27302L       47304L
                      CHROMIUM     CHROMIUM     CHROMIUM     MERCURY      MERCURY      COBALT       COBALT       SILVER
                     HEXAVALENT     TOTAL       EXTRBLE.      TOTAL        TOTAL        TOTAL       EXTRBLE.     EXTRBLE.

                 SUBM    CR           CR           CR          HG           HG           CO           CO           AG
                  ID    MG/L         MG/L         MG/L        MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)           1(1)         1(0)                     1(1)                      1(0)
           LOW           L.001        .008                     L.0001                    .011
          HIGH           L.001        .008                     L.0001                    .011
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
                       29009L       29305L       28009L       28302L       48009L       48302L       82009L       82302L
                       COPPER       COPPER       NICKEL       NICKEL       CADMIUM      CADMIUM      LEAD         LEAD
                        TOTAL       EXTRBLE.     TOTAL        EXTRBLE.     TOTAL        EXTRBLE.     TOTAL        EXTRBLE.

                 SUBM    CU           CU           NI           NI           CD           CD           PB           PB
                  ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)           1(0)                      1(0)                      1(1)                                   1(1)
           LOW           .011                      .235                      L.001                                  L.003
          HIGH           .011                      .235                      L.001                                  L.003
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE 112                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 20AL05EB5500    LAT. 53D 43M 11S  LONG. 113D 10M 44S   PR 3   UTM 12 356250E 5954300N  FOR APR 28, 1980 TO APR 28, 1980
JOHNS MANVILLE CANADA INC. FT SASK.       FINAL EFFLUENT GRAB
S3 T55 R22 W4M

                      30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                       ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM  ANTIMONY
                       TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL     EXTRBLE.     TOTAL       TOTAL

                SUBM    ZN          ZN          MN          MN          V           MO          MO          SB
                 ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)         1(0)                    1(0)
           LOW          .109                    .105
          HIGH          .109                    .105
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 113                  NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                 INDUSTRIAL MONITORING
STATION 20AL05EB5603    LAT. 53D 43M 16S  LONG. 113D 10M 45S   PR 3   UTM 12 356200E 5954500N  FOR APR 06, 1983 TO APR 06, 1983
LIQUID CARBONIC CANADA LTD. FT.SASK.      POND SEEPAGE     - GRAB
SE S3 T55 R22 W4M

                          02061F      10301L      10301F      10151L      10101L      02041L      97160S      97163S
                        TEMPERATURE     PH          PH      ALKALINITY  ALKALINITY   SPECIFIC   DISCHARGE   DISCHARGE
                        OF WATER                              PHENOL      TOTAL      CONDUCT.    INSTANT      DAILY
                                                            PHTHALEIN                                         MEAN
                   SUBM                                       CACO3       CACO3
                    ID    DEG.C       PH UNITS    PH UNITS    MG/L        MG/L        US/CM       M3/S        CFS
SAMPLES(FLAGS)             1(0)        1(0)                    1(0)        1(0)        1(0)
           LOW              6.0        11.9                    57.5        562.        1710.
          HIGH              6.0        11.9                    57.5        562.        1710.
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                          06201L      06202L      06301L      20103L      20105L      10602L      10604L      97160S
                        BICARBONT.  BICARBONT.  CARBONATE    CALCIUM     CALCIUM    HARDNESS    HARDNESS    DISCHARGE
                         (CALCD.)    (CALCD.)    (CALCD.)   DISSOLVED   DISSOLVED     TOTAL       TOTAL      INSTANT
                                                                        (CALCD.)    (CALCD.)
                   SUBM   HCO3        HCO3        CO3          CA          CA        CACO3       CACO3
                    ID   MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)             1(0)                    1(0)        1(0)                    1(1)
           LOW             545.                     69.        275.                  Q690.8
          HIGH             545.                     69.        275.                  Q690.8
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                                 10L

                          11103L      12102L      19103L      09107L      17203L      16306L      26009L      26304L
                          SODIUM    MAGNESIUM   POTASSIUM    FLUORIDE    CHLORIDE    SULPHATE      IRON        IRON
                        DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED     TOTAL      EXTRBLE.

                   SUBM    NA          MG          K           F           CL          SO4         FE          FE
                    ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             1(0)        1(1)        1(0)        1(0)        1(0)        1(0)                    1(0)
           LOW              14.         L0.         4.4         .34         79.        240.                     .31
          HIGH              14.         L0.         4.4         .34         79.        240.                     .31
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
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REQUEST 0004 -  0006 PAGE 114                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB5603    LAT. 53D 43M 16S  LONG. 113D 10M 45S   PR 3   UTM 12 356200E 5954500N  FOR APR 06, 1983 TO APR 06, 1983
LIQUID CARBONIC CANADA LTD. FT.SASK.      POND SEEPAGE     - GRAB
SE S3 T55 R22 W4M

                           07105L      07205L      07562L      07021L      07906L      07905L      15421L      97160S
                          NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN   PHOSPHORUS  DISCHARGE
                          DISSOLVED   DISSOLVED   DISSOLVED     TOTAL    PARTICULATE PARTICULATE   TOTAL      INSTANT
                          NO3 & NO2    NITRITE    AMMONIA     KJELDAHL     TOTAL      (CALCD.)
                   SUBM       N           N           N           N           N           N           P
                    ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)               1(0)        1(0)        1(0)        1(0)        1(1)                    1(0)        M3/S
           LOW              10.00         .80       21.300      37.500       L.01                     .130
          HIGH              10.00         .80       21.300      37.500       L.01                     .130
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                           10474L      10407L      10511L      10453L      14101L      97160S      97163S
                           RESIDUE     RESIDUE     RESIDUE     RESIDUE     SILICA     DISCHARGE   DISCHARGE
                            TOTAL   NONFILTRABLE  VOLATILE   FILTRABLE    REACTIVE     INSTANT      DAILY
                                                 NONFILTR.                                          MEAN
                   SUBM                          (CALCD.)                   SIO2
                    ID      MG/L        MG/L        MG/L        MG/L        MG/L        M3/S        CFS
SAMPLES(FLAGS)               1(0)        1(0)                    1(0)        1(0)
           LOW              1303.         33.                   1270.         2.5
          HIGH              1303.         33.                   1270.         2.5
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
                                                                             02L
                           00205L      02074L      06537L      06524L      02001L      16101L      10701L      06608L
                            TOTAL    TURBIDITY    PHENOLIC    OIL AND      ODOUR     SULPHIDE    SURFACT.     CYANIDE
                          DISSOLVED               MATERIAL    GREASE     THRESHOLD   DISSOLVED   N-ALKYL
                           SOLIDS                                          NUMBER                SULPHNTS.
                   SUBM                            PHENOL                                S          LAS          CN
                    ID      MG/L        NTU         MG/L        MG/L        TON         MG/L        MG/L        MG/L
SAMPLES(FLAGS)               1(0)        1(0)        1(0)        1(0)                                1(0)
           LOW              1016.         4.5        .041          .6                                 .47
          HIGH              1016.         4.5        .041          .6                                 .47
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE 115                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                      INDUSTRIAL MONITORING
STATION 20AL05EB5603    LAT. 53D 43M 16S  LONG. 113D 10M 45S   PR 3   UTM 12 356200E 5954500N  FOR APR 06, 1983 TO APR 06, 1983
LIQUID CARBONIC CANADA LTD. FT.SASK.      POND SEEPAGE     - GRAB
SE S3 T55 R22 W4M
                           08304L      08202L      06107L      06154L      06001L      06051L      06006L      06905L
                           OXYGEN      OXYGEN      CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                             TOTAL    BIOCHEM.    DISSOLVED   DISSOLVED    TOTAL       TOTAL      TOTAL     PARTICULATE
                             COD     DEMAND-BOD    ORGANIC    INORGANIC   ORGANIC    INORGANIC               TOTAL
                  SUBM       02          02          C           C           C           C           C           C
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              1(0)                    1(0)        1(0)                                            1(0)
           LOW             106.7                    31.0         6.5                                             2.20
          HIGH             106.7                    31.0         6.5                                             2.20
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
                           24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                          CHROMIUM    CHROMIUM    CHROMIUM    MERCURY     MERCURY     COBALT      COBALT      SILVER
                         HEXAVALENT    TOTAL      EXTRBLE.     TOTAL       TOTAL       TOTAL     EXTRBLE.    EXTRBLE.

                  SUBM       CR          CR          CR          HG          HG          CO          CO          AG
                   ID      MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             1(1)        1(0)                     1(0)                    1(0)
           LOW             L.001        .012                    .0002                    .011
          HIGH             L.001        .012                    .0002                    .011
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
                           29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                           COPPER      COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM      LEAD        LEAD
                           TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.

                  SUBM       CU          CU          NI          NI          CD          CD          PB          PB
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              1(0)                    1(0)                    1(0)                    1(1)
           LOW              .009                    .062                    .003                    L.003
          HIGH              .009                    .062                    .003                    L.003
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
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                                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                           INDUSTRIAL MONITORING
STATION 20AL05EB5603    LAT. 53D 43M 16S  LONG. 113D 10M 45S   PR 3   UTM 12 356200E 5954500N  FOR APR 06, 1983 TO APR 06, 1983
LIQUID CARBONIC CANADA LTD. FT.SASK.      POND SEEPAGE     - GRAB
SE S3 T55 R22 W4M

                         30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                          ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                          TOTAL     EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                 SUBM      ZN          ZN          MN          MN          V           MO          MO          SB
                  ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             1(0)                    1(0)                    1(0)                    1(0)
           LOW              .002                    .017                    .011                    .008
          HIGH              .002                    .017                    .011                    .008
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                         33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                         ARSENIC     ARSENIC     SELENIUM    SELENIUM    ALUMINUM    ALUMINUM    BERYLLIUM   BERYLLIUM
                         TOTAL      DISSOLVED    TOTAL      DISSOLVED   DISSOLVED    EXTRBLE.    DISSOLVED    EXTRBLE.

                 SUBM      AS          AS          SE          SE          AL          AL          BE          BE
                  ID      MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)                                                                         1(0)                    1(1)
           LOW                                                                          .060                   L.001
          HIGH                                                                          .060                   L.001
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 117                  NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                INDUSTRIAL MONITORING
STATION 20AL05EB5604    LAT. 53D 43M 16S  LONG. 113D 10M 45S   PR 3   UTM 12 356200E 5954500N  FOR APR 19, 1983 TO MAY 03, 1983
LIQUID CARBONIC CANADA LTD. FT.SASK.      POND SAMPLE      - GRAB

                        02061F      10301L      10301F      10151L      10101L      02041L      97160S      97163S
                      TEMPERATURE     PH          PH      ALKALINITY  ALKALINITY   SPECIFIC   DISCHARGE   DISCHARGE
                       OF WATER                             PHENOL      TOTAL      CONDUCT.    INSTANT      DAILY
                                                          PHTHALEIN                                          MEAN
                 SUBM                                       CACO3       CACO3
                  ID    DEG.C       PH UNITS    PH UNITS    MG/L        MG/L        US/CM       M3/S         CFS
SAMPLES(FLAGS)            2(0)        2(0)                    2(0)        2(0)        2(0)
           LOW             4.5        12.0                    35.0        599.       2630.
          HIGH             7.5        12.3                    190.       1550.       3370.
       AVERAGE             6.0                               112.5      1074.5       3000.
      STD.DEV.             2.1                               109.6       672.5        523.
  PERCNT:10TH
          25TH
   MEDIAN 50TH             6.0       12.15                   112.5      1074.5       3000.
          75TH
          90TH
SECONDARY CODE

                        06201L      06202L      06301L      20103L      20105L      10602L      10604L      97160S
                      BICARBONT.  BICARBONT.  CARBONATE    CALCIUM     CALCIUM     HARDNESS    HARDNESS   DISCHARGE
                       (CALCD.)    (CALCD.)    (CALCD.)   DISSOLVED   DISSOLVED     TOTAL       TOTAL      INSTANT
                                                                       (CALCD.)    (CALCD.)
                 SUBM   HCO3        HCO3        CO3         CA          CA          CACO3       CACO3
                  ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)            2(0)                    2(0)        2(0)                    2(2)
           LOW            645.                     42.        235.                  Q590.9
          HIGH           1426.                    228.        690.                 Q1727.0
       AVERAGE           1036.                    135.       462.5
      STD.DEV.            553.                    132.       321.7
  PERCNT:10TH
          25TH
   MEDIAN 50TH           1036.                    135.       462.5                  1159.0
          75TH
          90TH
SECONDARY CODE                                          10L

                        11103L      12102L      19103L      09107L      17203L      16306L      26009L      26304L
                        SODIUM     MAGNESIUM   POTASSIUM   FLUORIDE    CHLORIDE    SULPHATE      IRON        IRON
                      DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED     TOTAL      EXTRBLE.

                 SUBM     NA          MG          K           F           CL          SO4         FE          FE
                  ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            2(0)        2(2)        2(0)        2(0)        2(0)        2(0)                    2(0)
           LOW              2.         L0.          .8         .34         34.         35.                     .08
          HIGH             11.         L0.         2.9         .68        180.        205.                     .09
       AVERAGE             6.5                    1.85        .510      107.00       120.0                    .085
      STD.DEV.             6.4                    1.48        .240      103.24       120.2                    .007
  PERCNT:10TH
          25TH
   MEDIAN 50TH             6.5        L1.0        1.85        .510      107.00       120.0                    .085
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 118                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB5604    LAT. 53D 43M 16S  LONG. 113D 10M 45S   PR 3   UTM 12 356200E 5954500N  FOR APR 19, 1983 TO MAY 03, 1983
LIQUID CARBONIC CANADA LTD. FT.SASK.      POND SAMPLE      - GRAB

                          07105L        07205L        07562L        07021L        07906L        07905L        15421L        97160S
                         NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN     PHOSPHORUS    DISCHARGE
                         DISSOLVED     DISSOLVED     DISSOLVED      TOTAL      PARTICULATE   PARTICULATE     TOTAL        INSTANT
                         NO3 & NO2      NITRITE      AMMONIA      KJELDAHL       TOTAL        (CALCD.)
                   SUBM     N             N             N             N             N             N             P
                    ID    MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)            2(0)          2(0)          2(0)          2(0)          2(1)                        2(0)
           LOW             .40           .25         7.900        19.000          L.01                        .200
          HIGH            2.90           .66         8.930        49.000          1.00                        .400
       AVERAGE           1.650          .455         8.415        34.000          .505*                       .300
      STD.DEV.           1.768          .290          .728        21.213          .700*                       .141
   PERCNT:10TH
          25TH
   MEDIAN 50TH           1.650          .455         8.415        34.000          .505*                       .300
          75TH
          90TH
SECONDARY CODE

                          10474L        10407L        10511L        10453L        14101L        97160S        97163S
                         RESIDUE       RESIDUE       RESIDUE       RESIDUE        SILICA      DISCHARGE     DISCHARGE
                          TOTAL      NONFILTRABLE    VOLATILE     FILTRABLE     REACTIVE       INSTANT        DAILY
                                                    NONFILTR.                                                  MEAN
                   SUBM                             (CALCD.)                      SIO2
                    ID    MG/L          MG/L          MG/L          MG/L          MG/L          M3/S           CFS
SAMPLES(FLAGS)            2(0)          2(0)                        2(0)          2(0)
           LOW            818.            5.                        810.            .6
          HIGH           2645.            8.                       2640.           1.0
       AVERAGE          1731.5           6.5                       1725.0          .80
      STD.DEV.          1291.9           2.1                       1294.0          .28
   PERCNT:10TH
          25TH
   MEDIAN 50TH          1731.5           6.5                       1725.0          .80
          75TH
          90TH
SECONDARY CODE                                                                    02L

                          00205L        02074L        06537L        06524L        02001L        16101L        10701L        06608L
                          TOTAL       TURBIDITY     PHENOLIC      OIL AND        ODOUR       SULPHIDE      SURFACT.       CYANIDE
                         DISSOLVED                  MATERIAL      GREASE       THRESHOLD     DISSOLVED     N-ALKYL
                          SOLIDS                                                NUMBER                     SULPHNTS.
                   SUBM                             PHENOL                                       S           LAS            CN
                    ID    MG/L          NTU          MG/L          MG/L           TON           MG/L          MG/L          MG/L
SAMPLES(FLAGS)            2(0)          2(0)         2(0)          2(0)                                       2(0)
           LOW            669.            .9          .031           .3                                        .23
          HIGH           2032.           5.0          .069           .4                                        .70
       AVERAGE          1350.5           3.0          .050          .350                                      .465
      STD.DEV.           963.8           2.9          .027          .071                                      .332
   PERCNT:10TH
          25TH
   MEDIAN 50TH          1350.5           3.0          .050          .350                                      .465
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE 119                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB5604    LAT. 53D 43M 16S  LONG. 113D 10M 45S   PR 3   UTM 12 356200E 5954500N  FOR APR 19, 1983 TO MAY 03, 1983
LIQUID CARBONIC CANADA LTD. FT.SASK.      POND SAMPLE      - GRAB

                            08304L      08202L       06107L      06154L      06001L      06051L      06006L      06905L
                            OXYGEN      OXYGEN       CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                             TOTAL     BIOCHEM.     DISSOLVED   DISSOLVED     TOTAL       TOTAL      TOTAL     PARTICULATE
                              COD     DEMAND-BOD    ORGANIC     INORGANIC    ORGANIC    INORGANIC                TOTAL
                    SUBM      O2          O2          C           C           C           C           C           C
                     ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)               2(0)                    2(0)        2(0)                                             2(0)
           LOW               37.2                     9.2         2.1                                              .08
          HIGH              126.1                    22.0        15.0                                             1.40
       AVERAGE               81.6                    15.60        8.55                                             .74
      STD.DEV.               62.9                     9.05        9.12                                             .93
   PERCNT:10TH
          25TH
   MEDIAN 50TH               81.6                    15.60        8.55                                             .74
          75TH
          90TH
SECONDARY CODE
                            24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                           CHROMIUM    CHROMIUM    CHROMIUM     MERCURY     MERCURY     COBALT      COBALT      SILVER
                          HEXAVALENT    TOTAL       EXTRBLE.     TOTAL       TOTAL       TOTAL      EXTRBLE.    EXTRBLE.

                    SUBM      CR          CR          CR          HG          HG          CO          CO          AG
                     ID     MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)               2(2)        2(0)                    2(1)                    2(0)
           LOW              L.001        .008                   L.0001                    .005
          HIGH              L.001        .014                    .0002                    .007
       AVERAGE                           .011                    .0001*                   .006
      STD.DEV.                           .004                    .0001*                   .001
   PERCNT:10TH
          25TH
   MEDIAN 50TH              L.001        .011                    .0001*                   .006
          75TH
          90TH
SECONDARY CODE
                            29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                            COPPER      COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM      LEAD        LEAD
                             TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.

                    SUBM      CU          CU          NI          NI          CD          CD          PB          PB
                     ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)               2(0)                    2(0)                    2(1)                    1(1)        1(1)
           LOW               .005                    .016                   L.001                   L.003       L.003
          HIGH               .006                    .018                    .002                   L.003       L.003
       AVERAGE               .006                    .017                    .001*
      STD.DEV.               .001                    .001                    .001*
   PERCNT:10TH
          25TH
   MEDIAN 50TH               .006                    .017                    .001*
          75TH
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE 120                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                      INDUSTRIAL MONITORING
STATION 20AL05EB5604    LAT. 53D 43M 16S  LONG. 113D 10M 45S   PR 3   UTM 12 356200E 5954500N  FOR APR 19, 1983 TO MAY 03, 1983
LIQUID CARBONIC CANADA LTD. FT.SASK.      POND SAMPLE      - GRAB

                           30009L        30305L        25003L        25304L        23009L        42304L        42009L        51003L
                            ZINC          ZINC        MANGANESE     MANGANESE     VANADIUM     MOLYBDENUM    MOLYBDENUM    ANTIMONY
                           TOTAL        EXTRBLE.       TOTAL        EXTRBLE.       TOTAL        EXTRBLE.       TOTAL         TOTAL

                   SUBM      ZN            ZN            MN            MN            V             MO            MO            SB
                    ID      MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)              2(0)                        2(2)                        2(0)                        2(1)
           LOW              .014                        L.008                       .008                        L.001
          HIGH              .015                        L.008                       .008                        .006
       AVERAGE              .015                                                    .008                        .003*
      STD.DEV.              .001                                                    .000                        .004*
  PERCNT:10TH
          25TH
   MEDIAN 50TH              .015                        L.008                       .008                        .003*
          75TH
          90TH
SECONDARY CODE

                           33005L        33104L        34005L        34102L        13111L        13306L        04102L        04304L
                           ARSENIC       ARSENIC      SELENIUM      SELENIUM      ALUMINUM      ALUMINUM     BERYLLIUM     BERYLLIUM
                          TOTAL        DISSOLVED     TOTAL         DISSOLVED     DISSOLVED     EXTRBLE.     DISSOLVED      EXTRBLE.

                   SUBM      AS            AS            SE            SE            AL            AL            BE            BE
                    ID      MG/L          MG/L          MG/L          MG/L          UG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)                                                                                    2(0)                        2(2)
           LOW                                                                                    .025                        L.001
          HIGH                                                                                    .045                        L.001
       AVERAGE                                                                                    .035
      STD.DEV.                                                                                    .014
  PERCNT:10TH
          25TH
   MEDIAN 50TH                                                                                    .035                        L.001
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 121                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                    INDUSTRIAL MONITORING
STATION 20AL05EB5700    LAT. 53D 43M 14S  LONG. 113D 10M 55S   PR 3   UTM 12 356050E 5954400N  FOR AUG 19, 1980 TO JUL 18, 1984
CANADIAN INDUSTRIES LTD.                      INDUSTRIAL CHEMICALS FORT SASKATCHEWAN
FINAL EFFLUENT GRAB

                          02061F        10301L       10301F      10151L       10101L       02041L      97160S       97163S
                        TEMPERATURE       PH           PH       ALKALINITY   ALKALINITY   SPECIFIC    DISCHARGE    DISCHARGE
                        OF WATER                                 PHENOL        TOTAL      CONDUCT.     INSTANT       DAILY
                                                                PHTHALEIN                                            MEAN
                  SUBM                                            CACO3        CACO3
                   ID     DEG.C        PH UNITS     PH UNITS      MG/L         MG/L        US/CM        M3/S          CFS
SAMPLES(FLAGS)            7(0)          11(0)        1(0)        11(0)         8(0)        11(0)                      5(0)
           LOW            11.0           6.23         8.5           .0          38.0        250.                      .060
          HIGH            25.5           8.9          8.5         15.0         149.        1411.                      .15
       AVERAGE            17.1                                     1.4          99.2        576.                      .0960
      STD.DEV.             4.7                                     4.5          36.2        359.                      .0336
  PERCNT:10TH                            6.80                       .0                      271.
          25TH            14.5           7.23                       .0          75.7        280.                      .08
   MEDIAN 50TH            16.0           7.92                       .0          99.0        482.                      .09
          75TH            21.0           8.2                        .0         128.5        690.                      .1
          90TH                           8.40                      0.                       995.
SECONDARY CODE

                          06201L        06202L       06301L      20103L       20105L       10602L      10604L       97160S
                        BICARBONT.    BICARBONT.    CARBONATE    CALCIUM      CALCIUM     HARDNESS    HARDNESS     DISCHARGE
                         (CALCD.)      (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED      TOTAL       TOTAL       INSTANT
                                                                             (CALCD.)     (CALCD.)
                  SUBM    HCO3          HCO3          CO3          CA           CA          CACO3       CACO3
                   ID    MG/L           MG/L          MG/L         MG/L         MG/L        MG/L        MG/L          M3/S
SAMPLES(FLAGS)            8(0)          4(0)          8(0)         8(0)         2(0)        8(0)
           LOW            46.           46.            0.          28.0         27.9       112.1
          HIGH           160.          125.           18.         101.0        100.7       392.2
       AVERAGE           116.           87.            2.          51.0         64.3       199.4
      STD.DEV.            38.           34.            6.          24.6         51.5       103.6
  PERCNT:10TH
          25TH            92.           61.            0.          32.5                    119.8
   MEDIAN 50TH           121.           88.            0.          44.5         64.3       162.6
          75TH           149.          113.            0.          62.5                    263.1
          90TH
SECONDARY CODE                                                 10L

                          11103L        12102L       19103L      09107L       17203L       16306L      26009L       26304L
                          SODIUM       MAGNESIUM    POTASSIUM    FLUORIDE     CHLORIDE     SULPHATE     IRON         IRON
                         DISSOLVED     DISSOLVED    DISSOLVED   DISSOLVED    DISSOLVED    DISSOLVED     TOTAL       EXTRBLE.

                  SUBM    NA            MG            K            F            CL          S04          FE           FE
                   ID    MG/L          MG/L          MG/L         MG/L         MG/L        MG/L         MG/L         MG/L
SAMPLES(FLAGS)            8(0)          8(0)          8(0)         8(0)         8(0)        8(0)         3(1)         8(1)
           LOW             2.0           6.           .80          .38          3.          55.         L.01         L.020
          HIGH           155.0          35.          4.10         1.05         15.         640.0        1.41         3.510
       AVERAGE            53.6          17.5         2.39         .780         7.50        200.4         .573*        .985*
      STD.DEV.            50.6          10.9         1.51         .232         4.57        203.1         .739*       1.154*
  PERCNT:10TH
          25TH            13.5          11.0          .95         .620         3.50         69.0                      .230
   MEDIAN 50TH            47.0          13.0         2.35         .810         6.00        125.0         .30          .675
          75TH            75.5          25.5         3.80         .975        11.50        260.0                     1.270
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 122                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                         INDUSTRIAL MONITORING
STATION 20AL05EB5700    LAT. 53D 43M 14S  LONG. 113D 10M 55S   PR 3   UTM 12 356050E 5954400N  FOR AUG 19, 1980 TO JUL 18, 1984
CANADIAN INDUSTRIES LTD.                           INDUSTRIAL CHEMICALS FORT SASKATCHEWAN
FINAL EFFLUENT GRAB

                         07105L       07205L       07562L       07021L       07906L       07905L       15421L       97160S
                        NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN    PHOSPHORUS    DISCHARGE
                        DISSOLVED    DISSOLVED    DISSOLVED     TOTAL      PARTICULATE  PARTICULATE    TOTAL        INSTANT
                        NO3 & NO2     NITRITE      AMMONIA     KJELDAHL      TOTAL       (CALCD.)
                 SUBM      N            N            N            N            N            N            P
                  ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         M3/S
SAMPLES(FLAGS)           11(0)        11(7)        11(0)        11(0)         8(1)                     11(1)
           LOW             .05         L.02         .316         .600         L.01                      .008
          HIGH            5.70          .60        1.750        2.500          .71                     1.100
       AVERAGE           1.093         .106*        .979        1.538         .211*                     .411*
      STD.DEV.           1.685         .168*        .480         .698         .231*                     .351*
  PERCNT:10TH              .06         L.02          .60         .740                                  L.016
          25TH             .08         L.02         .650         .900         .080                      .048
   MEDIAN 50TH             .50         L.05         .790        1.320         .125                      .480
          75TH            1.15          .10          1.5          2.2         .280                      .640
          90TH           2.460          .15        1.690        2.200                                   .760
SECONDARY CODE                                   61L          15L                                   19L

                         10474L       10407L       10511L       10453L       14101L       97160S       97163S
                        RESIDUE      RESIDUE      RESIDUE      RESIDUE       SILICA      DISCHARGE    DISCHARGE
                         TOTAL     NONFILTRABLE   VOLATILE    FILTRABLE     REACTIVE      INSTANT       DAILY
                                                 NONFILTR.                                               MEAN
                 SUBM                            (CALCD.)                     SIO2
                  ID     MG/L         MG/L         MG/L         MG/L         MG/L         M3/S          CFS
SAMPLES(FLAGS)           11(0)        11(0)                      8(0)         8(0)                      5(0)
           LOW           204.0           2.                     200.0          2.9                      .060
          HIGH          1288.0         48.0                    1240.0        12.40                       .15
       AVERAGE           508.5         21.9                     520.0         6.53                      .0960
      STD.DEV.           321.9         18.0                     343.1         3.41                      .0336
  PERCNT:10TH             248.           3.
          25TH            253.          4.0                     300.0         3.70                       .08
   MEDIAN 50TH            402.          18.                     425.0         5.70                       .09
          75TH            708.          47.                     635.0         9.05                       .1
          90TH            823.          48.
SECONDARY CODE           71L          01L                                   02L

                         00205L       02074L       06537L       06524L       02001L       16101L       10701L       06608L
                          TOTAL      TURBIDITY    PHENOLIC     OIL AND       ODOUR      SULPHIDE     SURFACT.      CYANIDE
                        DISSOLVED                 MATERIAL     GREASE      THRESHOLD    DISSOLVED    N-ALKYL
                         SOLIDS                                              NUMBER                  SULPHNTS.
                 SUBM                             PHENOL                                    S          LAS           CN
                  ID     MG/L         NTU          MG/L         MG/L          TON         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            8(0)         6(0)        10(3)        11(3)                                   2(1)
           LOW           149.1          1.0        L.002        L.200                                   L.05
          HIGH           978.7         15.0         .030          7.0                                    .31
       AVERAGE           398.5          6.4         .007*       1.330*                                   .180*
      STD.DEV.           284.1          5.7         .009*       1.948*                                   .184*
  PERCNT:10TH                                      L.002         .330
          25TH           199.0          3.0        L.002           .4
   MEDIAN 50TH           308.0          3.7         .004           .7                                    .180*
          75TH           523.0         12.0         .010          1.1
          90TH                                      .020          2.0
SECONDARY CODE                                                  21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE 123                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                      INDUSTRIAL MONITORING
STATION 20AL05EB5700    LAT. 53D 43M 14S  LONG. 113D 10M 55S   PR 3   UTM 12 356050E 5954400N  FOR AUG 19, 1980 TO JUL 18, 1984
CANADIAN INDUSTRIES LTD.                    INDUSTRIAL CHEMICALS FORT SASKATCHEWAN
FINAL EFFLUENT GRAB

                            08304L       08202L       06107L       06154L       06001L       06051L       06006L       06905L
                            OXYGEN       OXYGEN       CARBON       CARBON       CARBON       CARBON       CARBON       CARBON
                             TOTAL      BIOCHEM.     DISSOLVED    DISSOLVED      TOTAL        TOTAL      TOTAL      PARTICULATE
                              COD      DEMAND-BOD     ORGANIC     INORGANIC     ORGANIC     INORGANIC                  TOTAL
                    SUBM      02           02           C            C            C            C            C            C
                     ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)              11(1)                      8(0)         8(0)         3(1)                                   8(1)
           LOW               L5.0                        .5         15.20        L1.0                                    L.01
          HIGH               25.4                       6.0         34.3         6.6                                     3.83
       AVERAGE               15.1*                      2.66        24.32        4.67*                                   1.46*
      STD.DEV.                7.7*                      1.64         8.06        3.18*                                   1.34*
   PERCNT:10TH                6.5
          25TH                7.1                       1.55        17.55                                                 .40
   MEDIAN 50TH               15.                        2.80        22.00        6.4                                     1.15
          75TH               23.                        3.05        33.00                                                 2.38
          90TH               24.5
SECONDARY CODE              01L                                                07L

                            24101L       24009L       24302L       80015L       80011L       27009L       27302L       47304L
                           CHROMIUM     CHROMIUM     CHROMIUM      MERCURY      MERCURY      COBALT       COBALT       SILVER
                          HEXAVALENT     TOTAL       EXTRBLE.      TOTAL        TOTAL        TOTAL       EXTRBLE.     EXTRBLE.

                    SUBM      CR           CR           CR           HG           HG           CO           CO           AG
                     ID      MG/L         MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)               7(7)        11(2)                       8(8)                     11(4)                      3(2)
           LOW               L.001        .005                      L.0001                    L.001                      L.02
          HIGH               L.001        .066                      L.0001                     .02                        .02
       AVERAGE                            .020*                                                .007*                      .020*
      STD.DEV.                            .022*                                                .006*                      .000*
   PERCNT:10TH                            .009                                                L.001
          25TH               L.001        .009                      L.0001                     .003
   MEDIAN 50TH               L.001        .01                       L.0001                     .007                      L.02
          75TH               L.001        .020                      L.0001                    L.01
          90TH                            .062                                                 .012
SECONDARY CODE

                            29009L       29305L       28009L       28302L       48009L       48302L       82009L       82302L
                            COPPER       COPPER       NICKEL       NICKEL       CADMIUM      CADMIUM       LEAD         LEAD
                             TOTAL       EXTRBLE.     TOTAL        EXTRBLE.     TOTAL        EXTRBLE.     TOTAL        EXTRBLE.

                    SUBM      CU           CU           NI           NI           CD           CD           PB           PB
                     ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)              11(0)                     11(4)                     11(9)                      4(2)         7(3)
           LOW               .001                      L.001                     L.001                     L.003        L.003
          HIGH               .062                       .17                      L.01                       .027         .019
       AVERAGE               .018                       .052*                     .004*                     .009*        .009*
      STD.DEV.               .019                       .060*                     .004*                     .012*        .005*
   PERCNT:10TH               .004                      L.001                     L.001
          25TH               .005                       .010                     L.001                     L.003         .004
   MEDIAN 50TH               .013                      L.02                      L.001                      .004*       L.01
          75TH               .017                       .104                     L.01                       .016         .01
          90TH               .049                       .145                     L.01
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE 124                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                          INDUSTRIAL MONITORING
STATION 20AL05EB5700    LAT. 53D 43M 14S  LONG. 113D 10M 55S   PR 3   UTM 12 356050E 5954400N  FOR AUG 19, 1980 TO JUL 18, 1984
CANADIAN INDUSTRIES LTD.                        INDUSTRIAL CHEMICALS FORT SASKATCHEWAN
FINAL EFFLUENT GRAB

                          30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                           ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM  ANTIMONY
                          TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                   SUBM    ZN          ZN          MN          MN          V           MO          MO          SB
                    ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            11(1)                   11(1)                   7(1)                    10(8)
           LOW             L.001                    .005                  L.002                    L.001
          HIGH              .11                     .678                   .011                    L.02
       AVERAGE              .036*                   .100*                  .005*                    .008*
      STD.DEV.              .034*                   .195*                  .003*                    .009*
  PERCNT:10TH               .006                  L.008                                           L.001
          25TH              .01                     .008                   .003                   L.001
   MEDIAN 50TH              .022                    .043                   .004                    .002*
          75TH              .060                    .093                   .008                   L.02
          90TH              .076                    .105                                          L.020
SECONDARY CODE

                          33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                          ARSENIC     ARSENIC     SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                          TOTAL      DISSOLVED    TOTAL      DISSOLVED   DISSOLVED    EXTRBLE.   DISSOLVED    EXTRBLE.

                   SUBM    AS          AS          SE          SE          AL          AL          BE          BE
                    ID    MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            3(0)                    2(2)                                8(0)                    7(7)
           LOW             .0003                  L.0002                                .280                  L.001
          HIGH             .0400                  L.0002                               2.050                  L.001
       AVERAGE             .0147                                                        .902
      STD.DEV.             .0220                                                        .585
  PERCNT:10TH
          25TH                                                                          .465                  L.001
   MEDIAN 50TH             .0037                  L.0002                                .753                  L.001
          75TH                                                                         1.225                  L.001
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 125                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB5701    LAT. 53D 43M 16S  LONG. 113D 10M 46S   PR 3   UTM 12 356200E 5954500N  FOR JUL 17, 1984 TO JUL 17, 1984
CANADIAN INDUSTRIES LTD.                         INDUSTRIAL CHEMICALS FORT SASKATCHEWAN
FINAL EFFLUENT COMPOSITE

                      02061F       10301L       10301F       10151L       10101L       02041L       97160S       97163S
                      TEMPERATURE  PH           PH           ALKALINITY   ALKALINITY   SPECIFIC     DISCHARGE    DISCHARGE
                      OF WATER                               PHENOL       TOTAL        CONDUCT.     INSTANT      DAILY
                                                             PHTHALEIN                                           MEAN
                 SUBM                                        CACO3        CACO3
                 ID   DEG.C        PH UNITS     PH UNITS     MG/L         MG/L         US/CM        M3/S         CFS
SAMPLES(FLAGS)                     1(0)                      1(0)         1(0)         1(0)                      1(0)
           LOW                     9.30                      24.2         125.6        869.                      .1
          HIGH                     9.30                      24.2         125.6        869.                      .1
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                      06201L       06202L       06301L       20103L       20105L       10602L       10604L       97160S
                      BICARBONT.   BICARBONT.   CARBONATE    CALCIUM      CALCIUM      HARDNESS     HARDNESS     DISCHARGE
                       (CALCD.)    (CALCD.)     (CALCD.)     DISSOLVED    DISSOLVED    TOTAL        TOTAL        INSTANT
                                                                          (CALCD.)     (CALCD.)
                 SUBM HCO3         HCO3         CO3          CA           CA           CACO3        CACO3
                 ID   MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         M3/S
SAMPLES(FLAGS)        1(0)         1(0)         1(0)         1(0)         1(0)         1(0)
           LOW        94.          95.          29.          47.0         46.9         207.9
          HIGH        94.          95.          29.          47.0         46.9         207.9
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
                                                             10L
                      11103L       12102L       19103L       09107L       17203L       16306L       26009L       26304L
                      SODIUM       MAGNESIUM    POTASSIUM    FLUORIDE     CHLORIDE     SULPHATE     IRON         IRON
                      DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    TOTAL        EXTRBLE.

                 SUBM NA           MG           K            F            CL           SO4          FE           FE
                 ID   MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)        1(0)         1(0)         1(0)         1(0)         1(0)         1(0)                      1(0)
           LOW        105.0        22.0         1.90         .540         9.00         296.0                     .530
          HIGH        105.0        22.0         1.90         .540         9.00         296.0                     .530
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 126                 NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                INDUSTRIAL MONITORING
STATION 20AL05EB5701    LAT. 53D 43M 16S  LONG. 113D 10M 46S   PR 3   UTM 12 356200E 5954500N  FOR JUL 17, 1984 TO JUL 17, 1984
CANADIAN INDUSTRIES LTD.                   INDUSTRIAL CHEMICALS FORT SASKATCHEWAN
FINAL EFFLUENT COMPOSITE

                        07105L       07205L       07562L       07021L       07906L       07905L       15421L       97160S
                       NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN    PHOSPHORUS   DISCHARGE
                       DISSOLVED    DISSOLVED    DISSOLVED     TOTAL      PARTICULATE  PARTICULATE    TOTAL       INSTANT
                       NO3 & NO2    NITRITE      AMMONIA      KJELDAHL      TOTAL       (CALCD.)
                 SUBM     N            N            N            N            N            N            P
                  ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         M3/S
SAMPLES(FLAGS)           1(0)         1(0)         1(0)         1(0)         1(0)                      1(0)
           LOW          6.900         .200        1.400        1.900         .280                     1.040
          HIGH          6.900         .200        1.400        1.900         .280                     1.040
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
    MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                        10474L       10407L       10511L       10453L       14101L       97160S       97163S
                       RESIDUE      RESIDUE      RESIDUE      RESIDUE      SILICA      DISCHARGE    DISCHARGE
                        TOTAL     NONFILTRABLE   VOLATILE    FILTRABLE    REACTIVE      INSTANT       DAILY
                                                NONFILTR.                                              MEAN
                 SUBM                           (CALCD.)                    SIO2
                  ID     MG/L         MG/L        MG/L         MG/L         MG/L         M3/S         CFS
SAMPLES(FLAGS)           1(0)         1(0)                     1(0)         1(0)                      1(0)
           LOW          686.0         26.0                    660.0         7.50                        .1
          HIGH          686.0         26.0                    660.0         7.50                        .1
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
    MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                                              02L

                        00205L       02074L       06537L       06524L       02001L       16101L       10701L       06608L
                        TOTAL       TURBIDITY    PHENOLIC     OIL AND       ODOUR       SULPHIDE     SURFACT.      CYANIDE
                       DISSOLVED                 MATERIAL     GREASE      THRESHOLD    DISSOLVED    N-ALKYL
                        SOLIDS                                             NUMBER                   SULPHNTS.
                 SUBM                            PHENOL                                    S           LAS          CN
                  ID     MG/L         NTU         MG/L         MG/L         TON          MG/L         MG/L         MG/L
SAMPLES(FLAGS)           1(0)         1(0)        1(0)         1(0)
           LOW          586.8         20.0        .006         .800
          HIGH          586.8         20.0        .006         .800
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
    MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
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REQUEST 0007 -  0009 PAGE 127                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB5701    LAT. 53D 43M 16S  LONG. 113D 10M 46S   PR 3   UTM 12 356200E 5954500N  FOR JUL 17, 1984 TO JUL 17, 1984
CANADIAN INDUSTRIES LTD.                      INDUSTRIAL CHEMICALS FORT SASKATCHEWAN
FINAL EFFLUENT COMPOSITE

                          08304L      08202L      06107L      06154L      06001L      06051L      06006L      06905L
                          OXYGEN      OXYGEN      CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                           TOTAL     BIOCHEM.    DISSOLVED   DISSOLVED     TOTAL       TOTAL     TOTAL     PARTICULATE
                            COD     DEMAND-BOD    ORGANIC    INORGANIC    ORGANIC    INORGANIC                TOTAL
                    SUBM    02          02          C           C           C           C           C           C
                     ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              1(0)                    1(0)        1(0)                                            1(0)
           LOW              15.9                    3.80       26.70                                            1.76
          HIGH              15.9                    3.80       26.70                                            1.76
       AVERAGE
      STD.DEV.
  PERCNT:10TH
          25TH
  MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                          24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                         CHROMIUM    CHROMIUM    CHROMIUM     MERCURY     MERCURY     COBALT      COBALT      SILVER
                        HEXAVALENT    TOTAL      EXTRBLE.     TOTAL       TOTAL       TOTAL      EXTRBLE.    EXTRBLE.

                    SUBM    CR          CR          CR          HG          HG          CO          CO          AG
                     ID    MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)                          1(0)                                            1(0)
           LOW                          .009                                            .005
          HIGH                          .009                                            .005
       AVERAGE
      STD.DEV.
  PERCNT:10TH
          25TH
  MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                          29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                          COPPER      COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM      LEAD        LEAD
                          TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.

                    SUBM    CU          CU          NI          NI          CD          CD          PB          PB
                     ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              1(0)                    1(0)                    1(0)                                1(1)
           LOW              .032                    .011                    .002                                L.003
          HIGH              .032                    .011                    .002                                L.003
       AVERAGE
      STD.DEV.
  PERCNT:10TH
          25TH
  MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE 128
                                                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 20AL05EB5701    LAT. 53D 43M 16S  LONG. 113D 10M 46S   PR 3   UTM 12 356200E 5954500N  FOR JUL 17, 1984 TO JUL 17, 1984
CANADIAN INDUSTRIES LTD.                                 INDUSTRIAL CHEMICALS FORT SASKATCHEWAN
FINAL EFFLUENT COMPOSITE

                          30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                           ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                          TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                   SUBM     ZN          ZN          MN          MN          V           MO          MO          SB
                    ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             1(0)                    1(0)                    1(0)                    1(0)
           LOW              .095                    .120                    .006                    .009
          HIGH              .095                    .120                    .006                    .009
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                          33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                          ARSENIC     ARSENIC    SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                          TOTAL      DISSOLVED    TOTAL      DISSOLVED   DISSOLVED   EXTRBLE.   DISSOLVED    EXTRBLE.

                   SUBM     AS          AS          SE          SE          AL          AL          BE          BE
                    ID     MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             1(0)                                                        1(0)                    1(1)
           LOW             .0390                                                       1.590                   L.001
          HIGH             .0390                                                       1.590                   L.001
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 129                  NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                 INDUSTRIAL MONITORING
STATION 20AL05EB5800    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR APR 14, 1980 TO MAY 29, 1984
SHERRITT GORDON MINES LTD FT SASK          FINAL EFFLUENT - GRAB
RIVER LOT 7 FT SASK SETTLEMENT

                        02061F       10301L       10301F       10151L       10101L       02041L       97160S       97163S
                      TEMPERATURE     PH           PH        ALKALINITY   ALKALINITY   SPECIFIC    DISCHARGE    DISCHARGE
                       OF WATER                                PHENOL        TOTAL      CONDUCT.     INSTANT       DAILY
                                                              PHTHALEIN                                             MEAN
                 SUBM                                           CACO3        CACO3
                  ID    DEG.C       PH UNITS     PH UNITS       MG/L         MG/L         US/CM        M3/S          CFS
SAMPLES(FLAGS)          30(0)        35(0)         9(0)         32(1)        29(0)        35(0)                     35(0)
           LOW           12.0          1.5          6.8            .0          20.         645.                      .632
          HIGH           40.5         10.5          9.9          335.        5325.       19580.                      3.14
       AVERAGE           27.6                                    17.6*       409.1        2936.                      1.9279
      STD.DEV.            7.8                                    60.0*       971.7        3971.                       .6752
  PERCNT:10TH            17.0          3.2                         .0          70.        1085.                      1.297
          25TH           22.0          7.4          7.9            .0         105.        1342.                      1.39
   MEDIAN 50TH           28.0          8.1          8.2            .0         169.        1763.                      1.63
          75TH           34.0          8.46         8.4           7.9         340.        2720.                      2.63
          90TH           37.0          8.7                       45.8         477.        4140.                      2.74
SECONDARY CODE

                        06201L       06202L       06301L       20103L       20105L       10602L       10604L       97160S
                      BICARBONT.   BICARBONT.   CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS     DISCHARGE
                       (CALCD.)     (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED      TOTAL        TOTAL       INSTANT
                                                                          (CALCD.)     (CALCD.)
                 SUBM    HCO3         HCO3          CO3           CA           CA         CACO3        CACO3
                  ID   MG/L         MG/L          MG/L          MG/L         MG/L         MG/L         MG/L          M3/S
SAMPLES(FLAGS)          29(1)         8(0)        29(1)         31(0)         5(0)        29(0)         3(0)
           LOW            24.          55.           0.            5.         49.7         86.6         182.
          HIGH          6491.        6491.         402.          540.         75.0       2192.4         216.
       AVERAGE           451.*        917.          23.*         99.5         61.8        395.0         196.3
      STD.DEV.          1172.*       2253.          75.*        112.8         11.4        447.2          17.6
  PERCNT:10TH             54.                        0.           34.                     134.3
          25TH            111.          98.          0.           46.         50.0        187.3
   MEDIAN 50TH            206.         124.          0.          68.0         66.6        264.5         191.
          75TH            369.         172.         10.          109.         67.7        352.5
          90TH            495.                      64.          145.                     633.8
SECONDARY CODE                                           11L 10L

                        11103L       12102L       19103L       09107L       17203L       16306L       26009L       26304L
                        SODIUM     MAGNESIUM    POTASSIUM     FLUORIDE     CHLORIDE     SULPHATE       IRON         IRON
                      DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL       EXTRBLE.

                 SUBM     NA           MG            K             F           CL          SO4           FE           FE
                  ID    MG/L         MG/L         MG/L          MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          32(0)        32(0)        32(0)         32(0)        32(0)        32(0)         3(0)        32(0)
           LOW            14.           8.          1.4           .12           7.         146.          .53          .05
          HIGH           455.         205.         18.2          4.30         410.        6000.         1.01         9.34
       AVERAGE           75.5         31.7         4.41          .427        36.00        822.3         .787        1.235
      STD.DEV.           82.2         38.8         3.54          .722        69.55       1181.2         .242        1.801
  PERCNT:10TH             23.          12.          1.9           .16          11.         255.                      .19
          25TH           31.0         16.0         2.10          .220        14.00        320.0                      .280
   MEDIAN 50TH           45.5         20.5         3.10          .285        19.00        490.0          .82         .655
          75TH           92.5         28.5         5.75          .345        36.00        695.0                     1.215
          90TH          130.0          55.          7.8           .36        47.00        1200.                      2.28
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 130                NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 20AL05EB5800    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR APR 14, 1980 TO MAY 29, 1984
SHERRITT GORDON MINES LTD FT SASK          FINAL EFFLUENT - GRAB
RIVER LOT 7 FT SASK SETTLEMENT

                       07105L        07205L        07562L        07021L        07906L        07905L        15421L        97160S
                      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN     PHOSPHORUS    DISCHARGE
                      DISSOLVED     DISSOLVED     DISSOLVED       TOTAL      PARTICULATE   PARTICULATE     TOTAL        INSTANT
                      NO3 & NO2     NITRITE       AMMONIA       KJELDAHL       TOTAL        (CALCD.)
               SUBM       N             N             N             N             N             N             P
                ID      MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)          35(0)         35(5)         35(0)         35(0)         31(0)                       35(0)
           LOW           4.60          L.05        11.600        22.750          .060                         .06
          HIGH          150.           11.4        1560.0        2640.0          2.25                       81.250
       AVERAGE          17.820          1.397*     156.463       216.561          .925                        4.417
      STD.DEV.          24.146          2.316*     254.484       430.802          .623                       14.609
  PERCNT:10TH            8.25          L.050        29.200        45.000          .220                         .125
          25TH          10.00           .200        59.67         77.500          .36                          .260
    MEDIAN 50TH         12.60           .61        108.00        142.00           .87                          .700
          75TH          14.00          1.65        175.00        197.50          1.34                         1.810
          90TH          26.50          3.0         240.          280.            1.82                         5.58
SECONDARY CODE                                     61L           15L                                        19L

                       10474L        10407L        10511L        10453L        14101L        97160S        97163S
                       RESIDUE       RESIDUE       RESIDUE       RESIDUE       SILICA       DISCHARGE     DISCHARGE
                        TOTAL      NONFILTRABLE    VOLATILE     FILTRABLE     REACTIVE      INSTANT        DAILY
                                                  NONFILTR.                                                MEAN
               SUBM                               (CALCD.)                      SIO2
                ID     MG/L          MG/L           MG/L          MG/L          MG/L          M3/S          CFS
SAMPLES(FLAGS)          35(0)         35(0)                       31(0)         32(0)                       35(0)
           LOW           408.            9.                        330.           2.5                        .632
          HIGH         11683.          881.                      11360.          13.2                        3.14
       AVERAGE          1934.3         205.4                      1825.5          6.32                       1.9279
      STD.DEV.          2220.1         243.5                      2319.5          2.29                        .6752
  PERCNT:10TH            582.           23.0                       530.           3.8                        1.297
          25TH           828.           34.                        760.           5.00                       1.39
    MEDIAN 50TH         1369.           88.                       1070.           6.15                       1.63
          75TH          2065.          375.                       1690.           7.00                       2.63
          90TH          2853.          614.                       2690.           8.7                        2.74
SECONDARY CODE          71L           01L                                       02L

                       00205L        02074L        06537L        06524L        02001L        16101L        10701L        06608L
                       TOTAL        TURBIDITY      PHENOLIC      OIL AND        ODOUR       SULPHIDE      SURFACT.       CYANIDE
                      DISSOLVED                    MATERIAL     GREASE        THRESHOLD     DISSOLVED     N-ALKYL
                       SOLIDS                                                  NUMBER                     SULPHNTS.
               SUBM                                 PHENOL                                      S            LAS           CN
                ID     MG/L          NTU            MG/L         MG/L            TON          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          32(0)         26(0)         34(4)         35(0)          1(0)                       26(0)          5(0)
           LOW           351.           3.0         L.002          1.7             1.                         .07           .005
          HIGH          6941.         335.0          .026         22.6             1.                        5.85           .031
       AVERAGE          1392.7         98.1          .008*         7.309                                     1.666          .0134
      STD.DEV.          1402.3         97.7          .006*         4.881                                     1.698          .0108
  PERCNT:10TH            553.          15.0         L.002          2.9                                        .20
          25TH           709.5         24.0          .005          3.900                                      .28           .005
    MEDIAN 50TH          907.5         50.0          .007          5.                                         .800          .010
          75TH          1520.0        200.0          .010         10.                                        2.90           .016
          90TH          1938.         235.0          .020         14.4                                       4.25
SECONDARY CODE                        73L                         21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE 131                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB5800    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR APR 14, 1980 TO MAY 29, 1984
SHERRITT GORDON MINES LTD FT SASK          FINAL EFFLUENT - GRAB
RIVER LOT 7 FT SASK SETTLEMENT

                      08304L       08202L       06107L       06154L       06001L       06051L       06006L       06905L
                      OXYGEN       OXYGEN       CARBON       CARBON       CARBON       CARBON       CARBON       CARBON
                       TOTAL      BIOCHEM.     DISSOLVED    DISSOLVED      TOTAL        TOTAL      TOTAL       PARTICULATE
                        COD      DEMAND-BOD     ORGANIC     INORGANIC     ORGANIC     INORGANIC                  TOTAL
               SUBM     O2           O2           C            C            C            C            C            C
                ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)         35(0)        2(0)        31(0)        31(0)         4(0)         1(0)         1(0)        30(0)
           LOW          22.1        14.7          4.8          1.2         44.9         75.          184.          .41
          HIGH         686.0        21.3       1700.0        151.         109.          75.          184.         49.07
       AVERAGE         171.6        18.00        95.79        41.56        67.47                                 16.48
      STD.DEV.         147.9         4.67       300.56        34.46        28.36                                 14.62
   PERCNT:10TH          40.2                      6.9         10.2                                                3.18
          25TH          61.5                     14.          17.0         51.35                                  6.32
   MEDIAN 50TH         109.6        18.00        27.0         24.0         58.00                                 10.93
          75TH         275.                      69.          71.          83.60                                 23.54
          90TH         330.0                    109.          75.                                                45.47
SECONDARY CODE         01L                                                07L

                      24101L       24009L       24302L       80015L       80011L       27009L       27302L       47304L
                     CHROMIUM     CHROMIUM     CHROMIUM     MERCURY      MERCURY       COBALT       COBALT       SILVER
                    HEXAVALENT     TOTAL       EXTRBLE.      TOTAL        TOTAL        TOTAL       EXTRBLE.     EXTRBLE.

               SUBM     CR           CR           CR           HG           HG           CO           CO           AG
                ID     MG/L         MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)         31(6)        35(1)                     31(27)                    35(0)                      3(3)
           LOW         L.001         .381                     L.0001                     .072                      L.02
          HIGH         1.690        L5.8                       .0005                    3.260                      L.02
       AVERAGE          .541*       1.027*                     .0001*                    .573
      STD.DEV.          .429*        .885*                     .0001*                    .667
   PERCNT:10TH         L.001         .453                     L.0001                     .142
          25TH          .260         .673                     L.0001                     .202
   MEDIAN 50TH          .473         .904                     L.0001                     .370                      L.02
          75TH          .870        1.110                     L.0001                     .634
          90TH          .970        1.360                      .0002                    1.160
SECONDARY CODE

                      29009L       29305L       28009L       28302L       48009L       48302L       82009L       82302L
                      COPPER       COPPER       NICKEL       NICKEL       CADMIUM      CADMIUM       LEAD         LEAD
                      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.

               SUBM     CU           CU           NI           NI           CD           CD           PB           PB
                ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)         35(0)                     35(0)                     35(6)                     19(3)        16(4)
           LOW          .009                      .238                     L.001                     L.003        L.003
          HIGH         1.490                    18.200                      .053                      .151         .04
       AVERAGE          .098                     2.877                      .006*                     .029*        .012*
      STD.DEV.          .245                     3.121                      .009*                     .035*        .010*
   PERCNT:10TH          .022                      .665                      .002                     L.003        L.003
          25TH          .027                     1.040                      .002                      .005         .004
   MEDIAN 50TH          .046                     2.390                      .005                      .021         .008*
          75TH          .080                     3.630                      .007                      .033         .017*
          90TH          .134                     4.890                     L.01                       .077         .022
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE 132                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                    INDUSTRIAL MONITORING
STATION 20AL05EB5800    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR APR 14, 1980 TO MAY 29, 1984
SHERRITT GORDON MINES LTD FT SASK         FINAL EFFLUENT - GRAB
RIVER LOT 7 FT SASK SETTLEMENT

                          30009L     30305L     25003L     25304L     23009L     42304L     42009L     51003L
                           ZINC       ZINC     MANGANESE  MANGANESE  VANADIUM  MOLYBDENUM MOLYBDENUM  ANTIMONY
                          TOTAL     EXTRBLE.    TOTAL     EXTRBLE.    TOTAL     EXTRBLE.    TOTAL      TOTAL

                 SUBM       ZN         ZN         MN         MN         V          MO         MO         SB
                  ID       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)            35(0)                 35(0)                 28(3)                 30(7)
           LOW              .586                  .013                L.002                 L.001
          HIGH             7.020                 1.210                  .073                  .239
       AVERAGE             2.687                  .111                  .012*                 .018*
      STD.DEV.             1.563                  .220                  .015*                 .043*
   PERCNT:10TH              .815                  .022                  .003                L.001
          25TH             1.520                  .027                  .005                  .005
   MEDIAN 50TH             2.500                  .055                  .006                  .008
          75TH             3.140                  .094                  .011                  .011
          90TH             5.160                  .173                  .022                  .027*
SECONDARY CODE

                          33005L     33104L     34005L     34102L     13111L     13306L     04102L     04304L
                          ARSENIC    ARSENIC   SELENIUM   SELENIUM   ALUMINUM   ALUMINUM  BERYLLIUM  BERYLLIUM
                          TOTAL     DISSOLVED  TOTAL      DISSOLVED  DISSOLVED  EXTRBLE.  DISSOLVED   EXTRBLE.

                 SUBM       AS         AS         SE         SE         AL         AL         BE         BE
                  ID       MG/L       MG/L       MG/L       MG/L       UG/L       MG/L       MG/L       MG/L
SAMPLES(FLAGS)            16(0)                 16(12)                           27(0)                 26(26)
           LOW             .0048                L.0002                             .123                L.001
          HIGH             .0480                 .0142                           30.700                L.001
       AVERAGE             .0160                 .0011*                           2.687
      STD.DEV.             .0130                 .0035*                           5.774
   PERCNT:10TH             .0051                L.0002                             .500                L.001
          25TH             .0065                L.0002                             .660                L.001
   MEDIAN 50TH             .0108                L.0002                            1.120                L.001
          75TH             .0223                 .0003*                           2.250                L.001
          90TH             .0365                 .0010                            4.320                L.001
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 133                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                    INDUSTRIAL MONITORING
STATION 20AL05EB5801    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR AUG 19, 1980 TO MAY 29, 1984
SHERRITT GORDON MINES LTD  FT SASK        FINAL EFFLUENT COMP
RIVER LOT 7 FT SASK SETTLEMENT

                         02061F       10301L       10301F       10151L       10101L       02041L       97160S       97163S
                       TEMPERATURE      PH           PH       ALKALINITY   ALKALINITY    SPECIFIC    DISCHARGE    DISCHARGE
                        OF WATER                                PHENOL        TOTAL      CONDUCT.     INSTANT       DAILY
                                                              PHTHALEIN                                             MEAN
                  SUBM                                          CACO3        CACO3
                   ID     DEG.C      PH UNITS     PH UNITS      MG/L         MG/L         US/CM        M3/S          CFS
SAMPLES(FLAGS)                         8(0)         1(0)        5(0)         6(0)         8(0)                      8(0)
           LOW                         6.10         8.9           .0         10.8        1039.                      1.38
          HIGH                         8.5          8.9         10.0         301.        2740.                      2.9
       AVERAGE                                                   2.0         187.3       1967.                      2.0012
      STD.DEV.                                                   4.5         111.7        526.                       .6511
  PERCNT:10TH
          25TH                         8.03                       .0         117.        1699.                      1.4850
   MEDIAN 50TH                         8.20                       .0         202.5       1945.                      1.6700
          75TH                         8.27                       .0         290.        2335.                      2.7100
          90TH
SECONDARY CODE

                         06201L       06202L       06301L       20103L       20105L       10602L       10604L       97160S
                       BICARBONT.   BICARBONT.   CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS    DISCHARGE
                        (CALCD.)     (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED      TOTAL        TOTAL      INSTANT
                                                                            (CALCD.)     (CALCD.)
                  SUBM    HCO3         HCO3         CO3           CA           CA         CACO3        CACO3
                   ID   MG/L           MG/L         MG/L         MG/L         MG/L         MG/L         MG/L        M3/S
SAMPLES(FLAGS)            5(0)         3(0)         5(0)         6(0)         1(0)         5(0)         1(0)
           LOW            143.          13.           0.          47.         316.7        179.1        932.
          HIGH            354.         204.          12.         317.         316.7        464.5        932.
       AVERAGE            266.         120.           2.         119.2                     305.8
      STD.DEV.             91.          97.           5.         101.2                     118.9
  PERCNT:10TH
          25TH            205.                        0.          51.                      201.5
   MEDIAN 50TH            289.         143.           0.          87.5                     311.7
          75TH            343.                        0.         125.                      372.3
          90TH
SECONDARY CODE                                               11L 10L

                         11103L       12102L       19103L       09107L       17203L       16306L       26009L       26304L
                         SODIUM     MAGNESIUM    POTASSIUM     FLUORIDE     CHLORIDE     SULPHATE       IRON         IRON
                        DISSOLVED   DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL       EXTRBLE.

                  SUBM    NA           MG           K            F            CL           SO4          FE           FE
                   ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)           6(0)         6(0)         6(0)         6(0)         6(0)         6(0)         2(0)         6(0)
           LOW            73.          15.          1.9          .19          41.         210.         1.10          .16
          HIGH           217.0         37.          5.40         .58         200.00       820.0        1.12         3.50
       AVERAGE           126.3         27.3         3.23         .340        104.00       555.0        1.110        1.073
      STD.DEV.            51.9          8.9         1.29         .136         61.83       226.9         .014        1.258
  PERCNT:10TH
          25TH            86.          18.          2.4          .24          51.         410.                       .21
   MEDIAN 50TH           119.0         30.0         2.90         .325         88.50       560.0        1.110         .725
          75TH           144.          34.          3.9          .38         155.         770.                       1.12
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 134                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB5801    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR AUG 19, 1980 TO MAY 29, 1984
SHERRITT GORDON MINES LTD  FT SASK        FINAL EFFLUENT COMP
RIVER LOT 7 FT SASK SETTLEMENT
                       07105L        07205L        07562L        07021L        07906L        07905L        15421L       97160S
                      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN     PHOSPHORUS   DISCHARGE
                      DISSOLVED     DISSOLVED     DISSOLVED       TOTAL      PARTICULATE   PARTICULATE     TOTAL         INSTANT
                      NO3 & NO2       NITRITE     AMMONIA       KJELDAHL       TOTAL       (CALCD.)
               SUBM       N             N             N            N             N             N             P
                 ID     MG/L          MG/L          MG/L          MG/L         MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)            8(0)         8(0)         8(0)         8(0)         6(0)                        8(0)
           LOW            2.5           .190       28.200        64.000          .51                        .030
          HIGH            18.           4.50       152.00       235.            1.77                        .938
       AVERAGE           11.088        1.713      104.037       145.438        1.068                        .412
      STD.DEV.            4.281        1.755       50.161        57.182         .505                        .313
   PERCNT:10TH
          25TH           10.200         .450       60.650        94.500         .600                        .160
   MEDIAN 50TH           11.400         .700      115.000       154.875        1.055                        .395
          75TH           12.500        3.355      150.400       182.875        1.42                         .610
          90TH
SECONDARY CODE                                     61L           15L                                      19L
                       10474L        10407L        10511L        10453L        14101L      97160S          97163S
                      RESIDUE        RESIDUE       RESIDUE       RESIDUE        SILICA     DISCHARGE     DISCHARGE
                       TOTAL      NONFILTRABLE    VOLATILE      FILTRABLE     REACTIVE       INSTANT        DAILY
                                                  NONFILTR.                                                 MEAN
               SUBM                               (CALCD.)                      SIO2
                 ID     MG/L           MG/L          MG/L          MG/L         MG/L          M3/S           CFS
SAMPLES(FLAGS)            8(0)          8(0)                          6(0)         6(0)                        8(0)
           LOW            643.            42.0                        600.          3.1                        1.38
          HIGH          2392.          862.                         1830.0          9.0                        2.9
       AVERAGE          1467.0         377.3                        1111.7         6.10                       2.0012
      STD.DEV.           578.2         306.9                         498.8         2.69                        .6511
   PERCNT:10TH
          25TH           989.5          82.0                         650.           3.1                       1.4850
   MEDIAN 50TH          1477.0         347.0                        1030.0         6.30                       1.6700
          75TH          1884.1         628.0                        1530.           8.8                       2.7100
          90TH
SECONDARY CODE                       01L                                       02L
                       00205L        02074L        06537L        06524L        02001L        16101L        10701L        06608L
                        TOTAL       TURBIDITY      PHENOLIC     OIL AND        ODOUR        SULPHIDE      SURFACT.        CYANIDE
                      DISSOLVED                    MATERIAL    GREASE        THRESHOLD     DISSOLVED      N-ALKYL
                       SOLIDS                                                  NUMBER                    SULPHNTS.
               SUBM                                 PHENOL                                      S           LAS           CN
                 ID     MG/L         NTU            MG/L          MG/L           TON          MG/L          MG/L          MG/L
SAMPLES(FLAGS)            6(0)         5(0)           7(0)          7(0)                                    4(0)
           LOW            553.          20.0           .004          4.6                                     .13
          HIGH           1456.         400.0           .035         20.3                                    2.45
       AVERAGE           1112.1        215.0           .012        11.643                                   1.017
      STD.DEV.            332.5        171.6           .011          5.604                                  1.086
   PERCNT:10TH
          25TH            988.          45.0           .004          8.0                                     .175
   MEDIAN 50TH           1122.0        290.0           .010         10.0                                     .745
          75TH           1431.7        320.0           .012         17.9                                    1.860
          90TH
SECONDARY CODE                                                   21L
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REQUEST 0007 - 0009 PAGE 135

NAQUADAT SUMMARY REPORT JAN 08, 1986
INDUSTRIAL MONITORING

STATION 20AL05EB5801 LAT. 53D 44M 10S LONG. 113D 11M 35S PR 3 UTM 12 355350E 5956150N FOR AUG 19, 1980 TO MAY 29, 1984
SHERRITT GORDON MINES LTD FT SASK FINAL EFFLUENT COMP
RIVER LOT 7 FT SASK SETTLEMENT

SUBM ID	08304L OXYGEN TOTAL COD 02 MG/L	08202L OXYGEN BIOCHEM. DEMAND-BOD 02 MG/L	06107L CARBON DISSOLVED ORGANIC C MG/L	06154L CARBON DISSOLVED INORGANIC C MG/L	06001L CARBON TOTAL ORGANIC C MG/L	06051L CARBON TOTAL INORGANIC C MG/L	06006L CARBON TOTAL C MG/L	06905L CARBON PARTICULATE TOTAL C MG/L
SAMPLES(FLAGS)	8(0)		6(0)	6(0)	2(0)			6(0)
LOW	66.0		16.	5.30	55.2			9.67
HIGH	273.0		70.0	66.	79.6			101.54
AVERAGE	137.4		31.97	35.22	67.40			46.59
STD.DEV.	67.7		21.42	22.70	17.25			35.84
PERCNT:10TH								
25TH	86.9		18.	14.0				10.62
MEDIAN 50TH	127.0		21.40	38.00	67.40			42.71
75TH	166.0		45.	50.				72.26
90TH								
SECONDARY CODE	01L				07L			

SUBM ID	24101L CHROMIUM HEXAVALENT CR MG/L	24009L CHROMIUM TOTAL CR MG/L	24302L CHROMIUM EXTRBLE. CR MG/L	80015L MERCURY TOTAL HG MG/L	80011L MERCURY TOTAL HG UG/L	27009L COBALT TOTAL CO MG/L	27302L COBALT EXTRBLE. CO MG/L	47304L SILVER EXTRBLE. AG MG/L
SAMPLES(FLAGS)	6(1)	8(0)		6(5)		8(0)		2(2)
LOW	L.001	.481		L.0001		.122		L.02
HIGH	.745	1.070		.0002		.65		L.02
AVERAGE	.471*	.768		.0001*		.382		
STD.DEV.	.277*	.197		.0000*		.158		
PERCNT:10TH								
25TH	.380	.622		L.0001		.294		
MEDIAN 50TH	.491	.814		L.0001		.389		L.020
75TH	.720	.861		L.0001		.458		
90TH								
SECONDARY CODE								

SUBM ID	29009L COPPER TOTAL CU MG/L	29305L COPPER EXTRBLE. CU MG/L	28009L NICKEL TOTAL NI MG/L	28302L NICKEL EXTRBLE. NI MG/L	48009L CADMIUM TOTAL CD MG/L	48302L CADMIUM EXTRBLE. CD MG/L	82009L LEAD TOTAL PB MG/L	82302L LEAD EXTRBLE. PB MG/L
SAMPLES(FLAGS)	8(0)		8(0)		8(1)		3(0)	5(0)
LOW	.106		.512		.002		.033	.012
HIGH	1.600		3.900		.01		.065	.154
AVERAGE	.640		2.358		.006*		.045	.056
STD.DEV.	.518		1.243		.003*		.017	.058
PERCNT:10TH								
25TH	.216		1.246		.004			.015
MEDIAN 50TH	.520		2.735		.005		.038	.04
75TH	.971		3.245		.008*			.06
90TH								
SECONDARY CODE								

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                                           NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                             INDUSTRIAL MONITORING
STATION 20AL05EB5801    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR AUG 19, 1980 TO MAY 29, 1984
SHERRITT GORDON MINES LTD  FT SASK         FINAL EFFLUENT COMP
RIVER LOT 7 FT SASK SETTLEMENT

                       30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                        ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                        TOTAL     EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                 SUBM    ZN          ZN          MN          MN          V           MO          MO          SB
                  ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)          8(0)                    8(0)                    5(1)                    7(1)
           LOW          1.030                    .019                   L.002                    .004
          HIGH          9.60                     .146                    .010                    .02
       AVERAGE          4.687                    .070                    .006*                   .012*
      STD.DEV.          3.105                    .037                    .004*                   .006*
  PERCNT:10TH
          25TH          2.085                    .050                    .003                    .009
   MEDIAN 50TH          4.490                    .068                    .006                    .010
          75TH          6.860                    .079                    .009                   L.02
          90TH
SECONDARY CODE

                       33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                       ARSENIC     ARSENIC     SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                       TOTAL      DISSOLVED    TOTAL      DISSOLVED   DISSOLVED   EXTRBLE.   DISSOLVED    EXTRBLE.

                 SUBM    AS          AS          SE          SE          AL          AL          BE          BE
                  ID    MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)          3(0)                    3(2)                                5(0)                    5(5)
           LOW          .0075                   L.0002                               .250                   L.001
          HIGH          .0258                    .0004                              2.580                   L.001
       AVERAGE          .0178                    .0003*                             1.456
      STD.DEV.          .0094                    .0001*                              .946
  PERCNT:10TH
          25TH                                                                      1.070                   L.001
   MEDIAN 50TH          .0200                   L.0002                              1.140                   L.001
          75TH                                                                      2.240                   L.001
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 137                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                        INDUSTRIAL MONITORING
STATION 20AL05EB5803    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR NOV 18, 1981 TO NOV 18, 1981
SHERRITT GORDON MINES LTD FT SASK          STORM WATER POND INLET GRAB
RIVER LOT 7 FT SASK SETTLEMENT

                         02061F       10301L       10301F       10151L       10101L       02041L       97160S       97163S
                       TEMPERATURE      PH           PH       ALKALINITY   ALKALINITY    SPECIFIC    DISCHARGE    DISCHARGE
                       OF WATER                                  PHENOL       TOTAL      CONDUCT.     INSTANT       DAILY
                                                             PHTHALEIN                                              MEAN
                  SUBM                                          CACO3        CACO3
                   ID    DEG.C        PH UNITS     PH UNITS     MG/L         MG/L         US/CM        M3/S          CFS
SAMPLES(FLAGS)            1(0)         1(0)         1(0)         1(0)         1(0)        1(0)
           LOW            17.0          8.5          8.6          7.5         112.        1402.
          HIGH            17.0          8.5          8.6          7.5         112.        1402.
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                         06201L       06202L       06301L       20103L       20105L       10602L       10604L       97160S
                       BICARBONT.   BICARBONT.   CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS    DISCHARGE
                        (CALCD.)     (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED      TOTAL        TOTAL       INSTANT
                                                                            (CALCD.)    (CALCD.)
                  SUBM    HCO3         HCO3          CO3           CA           CA        CACO3        CACO3
                   ID   MG/L          MG/L         MG/L          MG/L         MG/L        MG/L         MG/L          M3/S
SAMPLES(FLAGS)            1(0)                      1(0)         1(0)         1(0)                     1(0)
           LOW            118.                         9.         60.         59.7                     244.
          HIGH            118.                         9.         60.         59.7                     244.
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                                11L

                         11103L       12102L       19103L       09107L       17203L       16306L       26009L       26304L
                         SODIUM      MAGNESIUM    POTASSIUM    FLUORIDE     CHLORIDE     SULPHATE      IRON          IRON
                       DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED     TOTAL       EXTRBLE.

                  SUBM     NA           MG            K            F           CL          SO4          FE            FE
                   ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L          MG/L
SAMPLES(FLAGS)            1(0)         1(0)         1(0)         1(0)         1(0)        1(0)                      1(0)
           LOW            45.          23.          3.1          .78          10.         435.                      1.87
          HIGH            45.          23.          3.1          .78          10.         435.                      1.87
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 138                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                    INDUSTRIAL MONITORING
STATION 20AL05EB5803    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR NOV 18, 1981 TO NOV 18, 1981
SHERRITT GORDON MINES LTD FT SASK          STORM WATER POND INLET GRAB
RIVER LOT 7 FT SASK SETTLEMENT

                            07105L       07205L       07562L       07021L       07906L       07905L       15421L       97160S
                           NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN    PHOSPHORUS   DISCHARGE
                           DISSOLVED    DISSOLVED    DISSOLVED     TOTAL     PARTICULATE  PARTICULATE    TOTAL       INSTANT
                           NO3 & NO2     NITRITE      AMMONIA     KJELDAHL      TOTAL       (CALCD.)
                    SUBM       N            N            N            N            N            N            P
                     ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         M3/S
SAMPLES(FLAGS)               1(0)         1(0)         1(0)         1(0)         1(0)                      1(0)
           LOW              18.50          .45       41.250       45.000           .3                     1.250
          HIGH              18.50          .45       41.250       45.000           .3                     1.250
       AVERAGE
      STD.DEV.
  PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                        61L          15L                                     19L

                            10474L       10407L       10511L       10453L       14101L       97160S       97163S
                            RESIDUE      RESIDUE      RESIDUE      RESIDUE      SILICA      DISCHARGE    DISCHARGE
                             TOTAL    NONFILTRABLE   VOLATILE    FILTRABLE    REACTIVE      INSTANT       DAILY
                                                    NONFILTR.                                              MEAN
                    SUBM                             (CALCD.)                    SIO2
                     ID      MG/L         MG/L         MG/L         MG/L         MG/L         M3/S          CFS
SAMPLES(FLAGS)               1(0)         1(0)                      1(0)         1(0)
           LOW               868.          28.                      840.          6.2
          HIGH               868.          28.                      840.          6.2
       AVERAGE
      STD.DEV.
  PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                                                   02L

                            00205L       02074L       06537L       06524L       02001L       16101L       10701L       06608L
                             TOTAL      TURBIDITY    PHENOLIC     OIL AND       ODOUR      SULPHIDE     SURFACT.      CYANIDE
                           DISSOLVED                 MATERIAL     GREASE      THRESHOLD    DISSOLVED    N-ALKYL
                            SOLIDS                                              NUMBER                  SULPHNTS.
                    SUBM                              PHENOL                                    S           LAS          CN
                     ID      MG/L         NTU          MG/L         MG/L          TON          MG/L         MG/L         MG/L
3AMPLES(FLAGS)               1(0)         1(0)         1(0)         1(0)                                    1(0)
           LOW               725.         23.0         .003         47.3                                    6.00
          HIGH               725.         23.0         .003         47.3                                    6.00
       AVERAGE
      STD.DEV.
  PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
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REQUEST 0007 -  0009 PAGE 139                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB5803    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR NOV 18, 1981 TO NOV 18, 1981
SHERRITT GORDON MINES LTD FT SASK         STORM WATER POND INLET GRAB
RIVER LOT 7 FT SASK SETTLEMENT
                       08304L        08202L        06107L        06154L        06001L        06051L        06006L        06905L
                       OXYGEN        OXYGEN        CARBON        CARBON        CARBON        CARBON        CARBON        CARBON
                         TOTAL      BIOCHEM.      DISSOLVED     DISSOLVED        TOTAL         TOTAL      TOTAL         PARTICULATE
                          COD      DEMAND-BOD      ORGANIC     INORGANIC       ORGANIC      INORGANIC                    TOTAL
               SUBM      02              02          C             C              C             C            C             C
                ID     MG/L          MG/L           MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)           1(0)                        1(0)          1(0)                                                    1(0)
           LOW            20.6                        8.           21.                                                     24.
          HIGH            20.6                        8.           21.                                                     24.
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
                       24101L        24009L        24302L        80015L        80011L        27009L        27302L        47304L
                      CHROMIUM      CHROMIUM      CHROMIUM      MERCURY       MERCURY        COBALT        COBALT       SILVER
                     HEXAVALENT       TOTAL        EXTRBLE.      TOTAL         TOTAL         TOTAL         EXTRBLE.    EXTRBLE.

               SUBM     CR            CR             CR          HG            HG            CO            CO             AG
                ID     MG/L          MG/L           MG/L          MG/L          UG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          1(0)         1(0)                          1(1)                       1(0)
           LOW            .270          .450                      L.0001                        .295
          HIGH            .270          .450                      L.0001                        .295
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
                       29009L        29305L        28009L        28302L        48009L        48302L        82009L        82302L
                       COPPER        COPPER        NICKEL        NICKEL       CADMIUM       CADMIUM         LEAD          LEAD
                        TOTAL        EXTRBLE.      TOTAL         EXTRBLE.      TOTAL        EXTRBLE.       TOTAL       EXTRBLE.

               SUBM     CU            CU              NI           NI            CD            CD            PB             PB
                ID     MG/L          MG/L           MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          1(0)                       1(0)                          1(0)                       1(0)
           LOW            .031                     4.080                          .005                        .005
          HIGH            .031                     4.080                          .005                        .005
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE 140                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB5803    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR NOV 18, 1981 TO NOV 18, 1981
SHERRITT GORDON MINES LTD FT SASK          STORM WATER POND INLET GRAB
RIVER LOT 7 FT SASK SETTLEMENT
                             30009L       30305L       25003L       25304L       23009L       42304L       42009L       51003L
                              ZINC         ZINC       MANGANESE    MANGANESE    VANADIUM    MOLYBDENUM   MOLYBDENUM   ANTIMONY
                             TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL        TOTAL

                     SUBM     ZN           ZN           MN           MN           V            MO           MO           SB
                      ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)                1(0)                      1(0)                      1(0)
           LOW               1.470                      .068                      .006
          HIGH               1.470                      .068                      .006
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 141                              NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                             INDUSTRIAL MONITORING
STATION 20AL05EB5804    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR NOV 18, 1981 TO MAY 29, 1984
SHERRITT GORDON MINES LTD FT SASK        STORM WATER POND EFFLUENT GRAB
RIVER LOT 7 FT SASK SETTLEMENT

                           02061F       10301L       10301F      10151L      10101L      02041L       97160S       97163S
                         TEMPERATURE      PH           PH      ALKALINITY  ALKALINITY   SPECIFIC    DISCHARGE    DISCHARGE
                         OF WATER                                PHENOL       TOTAL     CONDUCT.     INSTANT       DAILY
                                                               PHTHALEIN                                            MEAN
                    SUBM                                         CACO3       CACO3
                     ID    DEG.C       PH UNITS     PH UNITS     MG/L        MG/L        US/CM        M3/S          CFS
SAMPLES(FLAGS)             29(0)        30(0)        7(0)        29(0)       27(0)       30(0)                     33(0)
           LOW               3.0          3.3         5.3           .0          8.       1796.                       .12
          HIGH              32.0         9.60         8.4        1130.      4145.0      22400.                      2.74
       AVERAGE              12.1                                  55.5       553.0       5399.                      .6725
      STD.DEV.               6.4                                 211.8       965.0       3729.                      .5469
  PERCNT:10TH                4.0         4.80                       .0         28.       2865.                       .19
          25TH               8.0          6.6         6.7           .0        106.       3180.                       .30
   MEDIAN 50TH              11.0         7.60         6.8           .0        214.       4665.                       .56
          75TH              15.0         8.30         7.8           .0        461.       5760.                       .79
          90TH              20.0         8.85                    172.5       1288.       8170.                     1.308
SECONDARY CODE

                           06201L       06202L       06301L      20103L      20105L      10602L       10604L       97160S
                         BICARBONT.   BICARBONT.   CARBONATE    CALCIUM     CALCIUM     HARDNESS     HARDNESS    DISCHARGE
                          (CALCD.)     (CALCD.)     (CALCD.)   DISSOLVED   DISSOLVED     TOTAL        TOTAL       INSTANT
                                                                           (CALCD.)    (CALCD.)
                    SUBM   HCO3         HCO3         CO3           CA          CA        CACO3        CACO3
                     ID  MG/L          MG/L         MG/L          MG/L        MG/L        MG/L         MG/L         M3/S
SAMPLES(FLAGS)             26(0)         7(0)       26(0)        30(0)        2(0)       29(1)         1(0)
           LOW               10.         197.          0.           8.        87.7        28.2         347.
          HIGH             1419.        1259.       1356.         166.       124.5       650.7         347.
       AVERAGE              355.         599.         74.        104.3       106.1       419.3*
      STD.DEV.              348.         345.        268.         45.8        26.0       169.0*
  PERCNT:10TH                34.                       0.         21.5                   158.8
          25TH              129.         390.          0.          86.                   284.7
   MEDIAN 50TH              254.         522.          0.        119.0       106.1       474.3
          75TH              452.         814.          0.         131.                   538.6
          90TH              814.                      207.        156.0                   591.5
SECONDARY CODE                                           11L 10L

                           11103L       12102L       19103L      09107L      17203L      16306L       26009L       26304L
                           SODIUM      MAGNESIUM    POTASSIUM   FLUORIDE    CHLORIDE    SULPHATE      IRON         IRON
                         DISSOLVED    DISSOLVED    DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED      TOTAL       EXTRBLE.

                    SUBM    NA           MG           K            F           CL         SO4          FE           FE
                     ID    MG/L         MG/L         MG/L         MG/L        MG/L        MG/L         MG/L         MG/L
SAMPLES(FLAGS)             30(0)        30(1)        30(0)        30(0)       30(0)       30(0)                    30(2)
           LOW               91.          L0.          2.4         1.17         12.        650.                     L.02
          HIGH              530.          61.         35.0       580.00        180.       7900.                     2.69
       AVERAGE             212.8        38.0*        10.51       42.432       55.80      1844.7                     .464*
      STD.DEV.             100.8        15.4*         6.38      107.315       47.38      1302.1                     .586*
  PERCNT:10TH              117.0         10.5         4.60        3.400       17.50       910.0                     .100
          25TH              159.          31.          6.6         5.50         21.       1125.                      .17
   MEDIAN 50TH             183.0         42.0         8.40       15.550       32.50      1612.5                     .270
          75TH              239.          45.         13.0       32.500         82.       2000.                      .51
          90TH             375.0         54.0        17.80       50.500      134.00      2862.5                    1.025
SECONDARY CODE
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REQUEST 0004 -  0006 PAGE 142                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB5804    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR NOV 18, 1981 TO MAY 29, 1984
SHERRITT GORDON MINES LTD FT SASK          STORM WATER POND EFFLUENT GRAB
RIVER LOT 7 FT SASK SETTLEMENT

                         07105L      07205L      07562L      07021L      07906L      07905L      15421L      97160S
                        NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN   PHOSPHORUS  DISCHARGE
                        DISSOLVED   DISSOLVED   DISSOLVED    TOTAL    PARTICULATE PARTICULATE   TOTAL       INSTANT
                        NO3 & NO2   NITRITE     AMMONIA     KJELDAHL    TOTAL      (CALCD.)
                  SUBM      N           N           N           N           N           N           P
                   ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)            30(0)       29(1)       30(0)       30(0)       30(0)                   30(0)
           LOW             4.00        L.05       58.000      69.500        .05                     .550
          HIGH            91.500       7.65      2702.0      3375.0        3.79                   1075.0
       AVERAGE            37.365       1.296*     536.333     836.067       .690                   68.185
      STD.DEV.            20.638       1.387*     589.441     968.227       .901                  192.188
  PERCNT:10TH             14.750        .25       134.500     145.250       .100                    4.065
          25TH            23.5          .65       194.00      222.00        .15                     7.100
   MEDIAN 50TH            32.000        .920      366.000     427.500       .325                   31.500
          75TH            50.00        1.64       560.00      870.00        .860                   57.500
          90TH            63.500       2.35      1441.50     2577.50       1.755                   83.125
SECONDARY CODE                                    61L         15L                                 19L

                         10474L      10407L      10511L      10453L      14101L      97160S      97163S
                         RESIDUE     RESIDUE     RESIDUE     RESIDUE     SILICA    DISCHARGE   DISCHARGE
                          TOTAL   NONFILTRABLE   VOLATILE   FILTRABLE   REACTIVE    INSTANT      DAILY
                                                NONFILTR.                                        MEAN
                  SUBM                          (CALCD.)                 SIO2
                   ID     MG/L        MG/L        MG/L        MG/L        MG/L        M3/S        CFS
SAMPLES(FLAGS)            30(0)       30(0)                   30(0)       30(0)                   33(0)
           LOW            850.          5.                    820.         4.8                     .12
          HIGH          16991.        531.                  16460.        52.0                    2.74
       AVERAGE           3976.4        60.2                  3914.7       20.22                    .6725
      STD.DEV.           3055.9        97.6                  2975.4       10.12                    .5469
  PERCNT:10TH            1743.0         7.5                  1715.0        9.25                    .19
          25TH           2258.         28.                   2230.        13.5                     .30
   MEDIAN 50TH           3189.5        34.5                  3155.0       17.65                    .56
          75TH           4147.         49.0                  4140.        28.4                     .79
          90TH           7474.5       117.0                  7415.0       33.25                   1.308
SECONDARY CODE                                                            02L

                         00205L      02074L      06537L      06524L      02001L      16101L      10701L      06608L
                          TOTAL    TURBIDITY    PHENOLIC    OIL AND      ODOUR     SULPHIDE    SURFACT.     CYANIDE
                        DISSOLVED               MATERIAL    GREASE     THRESHOLD   DISSOLVED   N-ALKYL
                         SOLIDS                                         NUMBER                 SULPHNTS.
                  SUBM                          PHENOL                                  S         LAS         CN
                   ID     MG/L        NTU        MG/L        MG/L         TON         MG/L        MG/L        MG/L
SAMPLES(FLAGS)            30(0)       24(0)      29(0)       29(1)                                24(0)       2(0)
           LOW           1031.          1.5        .004        L.2                                  .09        .014
          HIGH          11641.        100.0        .021       42.9                                16.50        .061
       AVERAGE           3026.0        22.9        .011        3.185*                              5.293       .0375
      STD.DEV.           1993.3        27.3        .005        7.932*                              4.628       .0332
  PERCNT:10TH            1467.5         3.0        .004         .4                                  .47
          25TH           1868.          5.1        .006         .9                                  .880
   MEDIAN 50TH           2560.0        12.5        .010        1.1                                 5.175       .0375
          75TH           3157.         24.0        .014        1.9                                 8.050
          90TH           5121.9        64.0        .019        4.170                              10.60
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE 143                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB5804    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR NOV 18, 1981 TO MAY 29, 1984
SHERRITT GORDON MINES LTD FT SASK          STORM WATER POND EFFLUENT GRAB
RIVER LOT 7 FT SASK SETTLEMENT

                          08304L      08202L      06107L      06154L      06001L      06051L      06006L      06905L
                          OXYGEN      OXYGEN      CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                           TOTAL     BIOCHEM.    DISSOLVED   DISSOLVED     TOTAL       TOTAL      TOTAL     PARTICULATE
                            COD     DEMAND-BOD    ORGANIC    INORGANIC    ORGANIC    INORGANIC                 TOTAL
                  SUBM      02           02          C           C           C           C           C           C
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            30(0)        2(1)       30(0)       30(1)                                           29(1)
           LOW             14.0        L1.0         7.6        L1.0                                             .33
          HIGH            587.8        23.5      1150.0      414.00                                           17.79
       AVERAGE            135.7       12.25*     151.20       52.47*                                           3.06*
      STD.DEV.            157.4       15.91*     283.16       78.65*                                           4.14*
   PERCNT:10TH             24.0                   15.00        6.80                                             .55
          25TH             39.0                   19.         15.                                              1.13
   MEDIAN 50TH             60.7       12.25*      44.50       34.50                                            2.10
          75TH            149.3                  119.0        55.                                              2.71
          90TH            433.0                  429.75       86.00                                            5.22
SECONDARY CODE

                          24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                         CHROMIUM    CHROMIUM    CHROMIUM    MERCURY     MERCURY     COBALT      COBALT      SILVER
                        HEXAVALENT    TOTAL      EXTRBLE.     TOTAL       TOTAL       TOTAL      EXTRBLE.    EXTRBLE.

                  SUBM      CR          CR          CR          HG          HG          CO          CO          AG
                   ID      MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            29(6)       30(0)                   29(26)                  30(0)
           LOW            L.001        .095                   L.0001                   .253
          HIGH             .620        .570                    .0007                  2.870
       AVERAGE             .134*       .255                    .0001*                 1.168
      STD.DEV.             .146*       .110                    .0001*                  .719
   PERCNT:10TH            L.001        .129                   L.0001                   .431
          25TH             .015        .161                   L.0001                   .665
   MEDIAN 50TH             .104        .237                   L.0001                   .949
          75TH             .193        .307                   L.0001                  1.510
          90TH             .302        .397                    .0003                  2.455
SECONDARY CODE

                          29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                          COPPER      COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM      LEAD        LEAD
                          TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.

                  SUBM      CU          CU          NI          NI          CD          CD          PB          PB
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            30(0)                   30(0)                   30(0)                   18(7)       11(5)
           LOW             .034                   1.520                    .002                   L.003       L.003
          HIGH             .675                  18.800                    .049                    .103        .039
       AVERAGE             .125                   7.088                    .009                    .013*       .012*
      STD.DEV.             .128                   3.769                    .009                    .023*       .012*
   PERCNT:10TH             .043                   3.220                    .003                   L.003       L.003
          25TH             .062                   4.840                    .005                   L.003       L.003
   MEDIAN 50TH             .090                   5.985                    .007                    .006        .006
          75TH             .136                   8.990                    .009                    .010        .020
          90TH             .202                  12.000                    .013                    .026        .026
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE 144                  NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 20AL05EB5804    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR NOV 18, 1981 TO MAY 29, 1984
SHERRITT GORDON MINES LTD FT SASK          STORM WATER POND EFFLUENT GRAB
RIVER LOT 7 FT SASK SETTLEMENT

                          30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                           ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM  ANTIMONY
                           TOTAL     EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                  SUBM      ZN          ZN          MN          MN          V           MO          MO          SB
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             30(0)                   30(0)                   28(0)                   26(0)
           LOW              .075                    .014                    .007                    .005
          HIGH             5.470                   1.970                    .045                    .032
       AVERAGE             1.063                    .262                    .015                    .012
      STD.DEV.             1.306                    .364                    .009                    .006
   PERCNT:10TH              .158                    .050                    .008                    .008
          25TH              .309                    .089                    .010                    .009
   MEDIAN 50TH              .648                    .189                    .013                    .010
          75TH             1.080                    .291                    .017                    .013
          90TH             2.560                    .344                    .029                    .016
SECONDARY CODE

                          33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                          ARSENIC     ARSENIC    SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                          TOTAL      DISSOLVED   TOTAL       DISSOLVED   DISSOLVED   EXTRBLE.   DISSOLVED    EXTRBLE.

                  SUBM      AS          AS          SE          SE          AL          AL          BE          BE
                   ID      MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             15(0)                   15(2)                               26(0)                   26(25)
           LOW             .0044                   L.0002                               .025                   L.001
          HIGH             .2700                   .0027                              10.610                    .004
       AVERAGE             .0496                   .0010*                              1.298                    .001*
      STD.DEV.             .0652                   .0009*                              2.187                    .001*
   PERCNT:10TH             .0077                   L.0002                               .070                   L.001
          25TH             .0174                   .0004                                .240                   L.001
   MEDIAN 50TH             .0235                   .0005                                .612                   L.001
          75TH             .0600                   .0016                               1.300                   L.001
          90TH             .0750                   .0025                               3.750                   L.001
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 145                NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                               INDUSTRIAL MONITORING
STATION 20AL05EB5805    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR FEB 08, 1982 TO MAY 29, 1984
SHERRITT GORDON MINES LTD FT SASK         STORM WATER POND EFFLUENT COMP
RIVER LOT 7 FT SASK SETTLEMENT

                          02061F      10301L      10301F      10151L      10101L      02041L      97160S      97163S
                     TEMPERATURE          PH          PH  ALKALINITY  ALKALINITY    SPECIFIC   DISCHARGE   DISCHARGE
                        OF WATER                              PHENOL       TOTAL    CONDUCT.     INSTANT       DAILY
                                                           PHTHALEIN                                            MEAN
                SUBM                                           CACO3       CACO3
                 ID        DEG.C    PH UNITS    PH UNITS        MG/L        MG/L       US/CM        M3/S         CFS
SAMPLES(FLAGS)              1(0)       10(0)        5(0)        9(0)       10(0)       10(0)                   11(0)
           LOW              14.0         6.2         7.0          .0         33.       3090.                     .59
          HIGH              14.0        9.50         7.9        15.0      3050.0       7140.                   1.662
       AVERAGE                                                   1.7       490.0       4999.                   .9562
      STD.DEV.                                                   5.0       905.4       1438.                   .3920
   PERCNT:10TH                          6.45                                62.0       3175.                     .59
          25TH                           7.1         7.1          .0        159.       3740.                    .600
   MEDIAN 50TH                          7.50         7.2          .0       222.0       5290.                     .80
          75TH                           7.9         7.5          .0        296.       6110.                   1.353
          90TH                          8.95                              1727.0       6760.                   1.365
SECONDARY CODE

                          06201L      06202L      06301L      20103L      20105L      10602L      10604L      97160S
                      BICARBONT.  BICARBONT.   CARBONATE     CALCIUM     CALCIUM    HARDNESS    HARDNESS   DISCHARGE
                         (CALCD.)    (CALCD.)    (CALCD.)  DISSOLVED   DISSOLVED       TOTAL       TOTAL     INSTANT
                                                                         (CALCD.)    (CALCD.)
                SUBM        HCO3        HCO3         CO3          CA          CA       CACO3       CACO3
                 ID         MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)              9(0)        1(0)        9(0)       10(0)                   10(0)
           LOW               40.        454.          0.        33.0                   197.7
          HIGH              456.        454.         18.        158.                   634.9
       AVERAGE              247.                      2.       115.2                   444.9
      STD.DEV.              126.                      6.        41.7                   144.8
   PERCNT:10TH                                                  52.5                   236.3
          25TH              194.                      0.         87.                   311.5
   MEDIAN 50TH              247.                      0.       128.5                   473.0
          75TH              301.                      0.        147.                   547.7
          90TH                                                 157.5                   613.5
SECONDARY CODE                                                   10L

                          11103L      12102L      19103L      09107L      17203L      16306L      26009L      26304L
                          SODIUM   MAGNESIUM   POTASSIUM    FLUORIDE    CHLORIDE    SULPHATE        IRON        IRON
                       DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED       TOTAL    EXTRBLE.

                SUBM          NA          MG           K           F          CL         SO4          FE          FE
                 ID         MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             10(0)       10(0)       10(0)       10(0)       10(0)       10(0)                   10(1)
           LOW              128.         14.         4.4        3.50         11.       1150.                   L.020
          HIGH              296.         59.        20.2       39.50        220.       2650.                    2.05
       AVERAGE             193.9        38.2       11.02      16.905       73.80      1678.0                   .415*
      STD.DEV.              58.9        13.7        5.23      11.399       65.16       497.5                   .598*
   PERCNT:10TH             128.5        21.0        4.55       5.250       15.50      1200.0                   .035*
          25TH              130.         30.         6.2        9.30         25.       1250.                     .10
   MEDIAN 50TH             191.5        37.0       10.85      12.100       58.50      1615.0                    .260
          75TH             214.0         48.        14.1       25.75        106.       1850.                     .39
          90TH             288.0        57.5       18.60      34.750      180.00      2475.0                   1.295
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 146                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB5805    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR FEB 08, 1982 TO MAY 29, 1984
SHERRITT GORDON MINES LTD FT SASK         STORM WATER POND EFFLUENT COMP
RIVER LOT 7 FT SASK SETTLEMENT

                       07105L        07205L        07562L       07021L         07906L        07905L      15421L          97160S
                      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN     NITROGEN      PHOSPHORUS    DISCHARGE
                      DISSOLVED     DISSOLVED     DISSOLVED      TOTAL       PARTICULATE   PARTICULATE    TOTAL          INSTANT
                      NO3 & NO2      NITRITE      AMMONIA       KJELDAHL       TOTAL         (CALCD.)
               SUBM       N             N             N             N            N             N              P
                ID      MG/L         MG/L          MG/L           MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)            10(0)         10(0)         10(0)         10(0)          9(0)                       10(0)
           LOW            10.50           .25        144.00        164.00          .080                       1.400
          HIGH           82.000          2.44        1450.0        3275.0          3.91                      140.00
       AVERAGE           39.325         1.131       517.890       928.300         1.356                      52.950
      STD.DEV.           22.517          .685       374.679       956.576         1.321                      44.098
   PERCNT:10TH           12.500          .400       147.500       206.500                                     7.500
          25TH            22.50           .65        283.00        300.00            .3                      15.500
   MEDIAN 50TH           36.500          .950       472.450       675.000           .76                      40.625
          75TH            56.75          1.30        606.00        960.00          1.90                      82.500
          90TH           72.250         2.280       1042.00       2557.50                                   120.000
SECONDARY CODE                                      61L           15L                                       19L

                       10474L        10407L        10511L        10453L         14101L      97160S      97163S
                      RESIDUE       RESIDUE       RESIDUE        RESIDUE        SILICA     DISCHARGE      DISCHARGE
                       TOTAL     NONFILTRABLE     VOLATILE      FILTRABLE     REACTIVE       INSTANT        DAILY
                                                  NONFILTR.                                                 MEAN
               SUBM                               (CALCD.)                      SIO2
                ID     MG/L          MG/L           MG/L          MG/L          MG/L          M3/S           CFS
SAMPLES(FLAGS)            10(0)         10(0)                       10(0)         10(0)                       11(0)
           LOW            2257.           19.                       2230.          11.2                         .59
          HIGH            8589.           93.                       8510.           36.                       1.662
       AVERAGE           4154.5          53.5                      4102.0         20.97                       .9562
      STD.DEV.           1807.1          29.5                      1791.1          8.75                       .3920
   PERCNT:10TH           2398.0          19.0                      2380.0         11.50                         .59
          25TH            2792.           23.                       2730.          14.5                        .600
   MEDIAN 50TH           4117.5          57.5                      4035.0         17.10                         .80
          75TH           4528.8           79.                      4510.0          28.0                       1.353
          90TH           6783.5          90.5                      6700.0         33.50                       1.365
SECONDARY CODE                                                                 02L

                       00205L        02074L        06537L        06524L         02001L        16101L        10701L          06608L
                       TOTAL        TURBIDITY       PHENOLIC    OIL AND         ODOUR       SULPHIDE       SURFACT.          CYANIDE
                      DISSOLVED                     MATERIAL   GREASE         THRESHOLD     DISSOLVED     N-ALKYL
                       SOLIDS                                                   NUMBER                    SULPHNTS.
               SUBM                                 PHENOL                                      S          LAS              CN
                ID      MG/L         NTU            MG/L         MG/L             TON         MG/L         MG/L            MG/L
SAMPLES(FLAGS)            10(0)          9(0)          9(1)          9(0)                                      9(0)
           LOW            1640.           4.9         L.002            .4                                       .80
          HIGH           4139.7          84.0          .015           2.7                                     14.50
       AVERAGE           2850.2          38.8         .010*         1.511                                     7.633
      STD.DEV.            926.5          31.7         .004*          .804                                     4.561
   PERCNT:10TH           1643.0
          25TH            2158.           6.5          .008          .800                                      4.65
   MEDIAN 50TH           2793.5          30.0          .011           1.8                                      7.05
          75TH            3767.          62.0          .012           2.0                                     11.60
          90TH           4111.3
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE 147                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB5805    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR FEB 08, 1982 TO MAY 29, 1984
SHERRITT GORDON MINES LTD FT SASK         STORM WATER POND EFFLUENT COMP
RIVER LOT 7 FT SASK SETTLEMENT
                        08304L        08202L        06107L        06154L        06001L        06051L        06006L        06905L
                        OXYGEN        OXYGEN        CARBON        CARBON        CARBON        CARBON        CARBON        CARBON
                        TOTAL        BIOCHEM.     DISSOLVED     DISSOLVED       TOTAL         TOTAL         TOTAL      PARTICULATE
                         COD        DEMAND-BOD     ORGANIC      INORGANIC      ORGANIC      INORGANIC                     TOTAL
                SUBM      O2            O2            C             C             C             C             C             C
                 ID      MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)           10(0)                        9(0)          9(0)                                                    9(0)
           LOW            12.0                        9.90            5.                                                     .75
          HIGH           484.0                         72.        174.80                                                   11.45
       AVERAGE            93.3                       35.77         46.98                                                    3.86
      STD.DEV.           140.8                       22.15         50.33                                                    3.11
   PERCNT:10TH            19.5
          25TH            31.1                         18.           20.                                                      2.
   MEDIAN 50TH            46.0                         39.           35.                                                    3.31
          75TH            72.0                         50.           46.                                                    4.19
          90TH           304.7
SECONDARY CODE
                        24101L        24009L        24302L        80015L        80011L        27009L        27302L        47304L
                       CHROMIUM      CHROMIUM      CHROMIUM      MERCURY       MERCURY        COBALT        COBALT        SILVER
                      HEXAVALENT      TOTAL       EXTRBLE.        TOTAL         TOTAL         TOTAL      EXTRBLE.      EXTRBLE.

                SUBM      CR            CR            CR            HG            HG            CO            CO            AG
                 ID      MG/L          MG/L          MG/L          MG/L          UG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)           10(5)         10(0)                        9(6)                       10(0)
           LOW           L.001          .141                      L.0001                        .467
          HIGH            .445          .463                       .0013                       4.670
       AVERAGE            .095*         .276                       .0003*                      1.544
      STD.DEV.            .147*         .098                       .0004*                      1.262
   PERCNT:10TH           L.001          .146                                                    .567
          25TH           L.001          .214                      L.0001                        .776
   MEDIAN 50TH            .001*         .273                      L.0001                       1.217
          75TH            .164          .317                       .0002                       1.550
          90TH            .328          .418                                                   3.620
SECONDARY CODE
                        29009L        29305L        28009L        28302L        48009L        48302L        82009L        82302L
                        COPPER        COPPER        NICKEL        NICKEL       CADMIUM       CADMIUM         LEAD          LEAD
                        TOTAL        EXTRBLE.       TOTAL        EXTRBLE.       TOTAL        EXTRBLE.       TOTAL        EXTRBLE.

                SUBM      CU            CU            NI            NI            CD            CD            PB            PB
                 ID      MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)           10(0)                        9(0)                       10(0)                        8(1)          2(0)
           LOW            .025                        .600                        .003                       L.003          .024
          HIGH           2.640                      23.900                        .017                        .305          .028
       AVERAGE            .374                       7.849                        .008                        .051*         .026
      STD.DEV.            .800                       6.668                        .004                        .103*         .003
   PERCNT:10TH            .035                                                    .004
          25TH            .083                       4.430                        .005                        .006
   MEDIAN 50TH            .102                       5.860                        .007                        .012          .026
          75TH            .242                       9.000                        .010                        .033
          90TH           1.450                                                    .015
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE 148                   NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 20AL05EB5805    LAT. 53D 44M 10S  LONG. 113D 11M 35S   PR 3   UTM 12 355350E 5956150N  FOR FEB 08, 1982 TO MAY 29, 1984
SHERRITT GORDON MINES LTD FT SASK          STORM WATER POND EFFLUENT COMP
RIVER LOT 7 FT SASK SETTLEMENT
                           30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                            ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                           TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                   SUBM     ZN          ZN          MN          MN          V           MO          MO          SB
                    ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             10(0)                   10(0)                   9(1)                    9(0)
           LOW              .167                    .012                   L.002                    .009
          HIGH             4.470                    .552                    .029                    .017
       AVERAGE              .917                    .195                    .014*                   .013
      STD.DEV.             1.310                    .163                    .008*                   .002
   PERCNT:10TH              .169                    .035
          25TH              .217                    .066                    .011                    .011
   MEDIAN 50TH              .379                    .148                    .013                    .012
          75TH             1.050                    .266                    .016                    .014
          90TH             2.880                    .448
SECONDARY CODE
                           33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                           ARSENIC     ARSENIC     SELENIUM    SELENIUM    ALUMINUM    ALUMINUM    BERYLLIUM   BERYLLIUM
                           TOTAL      DISSOLVED    TOTAL      DISSOLVED   DISSOLVED    EXTRBLE.   DISSOLVED    EXTRBLE.

                   SUBM     AS          AS          SE          SE          AL          AL          BE          BE
                    ID     MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             6(0)                    6(1)                                9(0)                    9(9)
           LOW             .0047                   L.0002                               .062                   L.001
          HIGH             .0405                    .0031                              4.11                    L.001
       AVERAGE             .0181                    .0017*                             1.867
      STD.DEV.             .0123                    .0012*                             1.553
   PERCNT:10TH
          25TH             .0100                    .0004                               .705                   L.001
   MEDIAN 50TH             .0171                    .0018                              1.210                   L.001
          75TH             .019                     .0030                              3.140                   L.001
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 149                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                            INDUSTRIAL MONITORING
STATION 20AL05EB6200    LAT. 53D 43M 10S  LONG. 113D 10M 26S   PR 3   UTM 12 356550E 5954300N  FOR APR 20, 1983 TO JUL 17, 1984
THIO-PET CHEMICALS LTD FT SASK.           POND WATER GRAB
SE S3 T55 R22 W4M
                            02061F          10301L          10301F          10151L          10101L          02041L          97160S          97163S
                       TEMPERATURE              PH              PH      ALKALINITY      ALKALINITY        SPECIFIC       DISCHARGE       DISCHARGE
                          OF WATER                                          PHENOL           TOTAL        CONDUCT.         INSTANT           DAILY
                                                                         PHTHALEIN                                                          MEAN
                SUBM                                                         CACO3           CACO3
                  ID         DEG.C        PH UNITS        PH UNITS            MG/L            MG/L           US/CM            M3/S             CFS
      SAMPLES(FLAGS)          3(0)            4(0)                            3(0)            4(0)            4(0)
                 LOW           4.5            7.50                              .0             61.           1505.
                HIGH          21.0            7.90                              .0            114.           2860.
             AVERAGE          12.5                                              .0            90.3           2083.
            STD.DEV.           8.3                                              .0            26.3            625.
         PERCNT:10TH
                25TH                          7.65                                            68.2           1581.
         MEDIAN 50TH          12.0            7.80                              .0            93.2           1984.
                75TH                          7.85                                           112.5           2585.
                90TH
      SECONDARY CODE
                            06201L          06202L          06301L          20103L          20105L          10602L          10604L          97160S
                        BICARBONT.      BICARBONT.       CARBONATE         CALCIUM         CALCIUM        HARDNESS        HARDNESS       DISCHARGE
                          (CALCD.)        (CALCD.)        (CALCD.)       DISSOLVED       DISSOLVED           TOTAL           TOTAL         INSTANT
                                                                                          (CALCD.)        (CALCD.)
                SUBM          HCO3            HCO3             CO3              CA              CA           CACO3           CACO3
                  ID          MG/L            MG/L            MG/L            MG/L            MG/L            MG/L            MG/L            M3/S
      SAMPLES(FLAGS)          3(0)            3(0)            3(0)            4(0)                            4(0)
                 LOW           74.             74.              0.           161.0                           690.2
                HIGH          139.            135.              0.           275.0                          1312.5
             AVERAGE          102.            100.              0.           211.5                           952.2
            STD.DEV.           33.             32.              0.            55.1                           274.8
         PERCNT:10TH
                25TH                                                         165.5                           742.6
         MEDIAN 50TH           92.             92.              0.           205.0                           903.0
                75TH                                                         257.5                          1161.7
                90TH
      SECONDARY CODE                                                           10L
                            11103L          12102L          19103L          09107L          17203L          16306L          26009L          26304L
                            SODIUM       MAGNESIUM       POTASSIUM        FLUORIDE        CHLORIDE        SULPHATE            IRON            IRON
                         DISSOLVED       DISSOLVED       DISSOLVED       DISSOLVED       DISSOLVED       DISSOLVED           TOTAL        EXTRBLE.

                SUBM            NA              MG               K               F              CL             SO4              FE              FE
                  ID          MG/L            MG/L            MG/L            MG/L            MG/L            MG/L            MG/L            MG/L
      SAMPLES(FLAGS)          4(0)            4(0)            4(0)            4(0)            4(0)            4(0)                            4(1)
                 LOW          51.0            70.0             7.9            .710             13.           600.0                           L.020
                HIGH         110.0           152.0           14.50             .96             52.          1290.0                             .33
             AVERAGE          83.5           103.0           11.72            .843           36.25           925.0                           .150*
            STD.DEV.          29.5            35.0            3.04            .117           17.21           328.5                           .135*
         PERCNT:10TH
                25TH          58.5            80.0            9.30            .745           23.50           650.0                           .050*
         MEDIAN 50TH          86.5            95.0           12.25            .850           40.00           905.0                            .125
                75TH         108.5           126.0           14.15            .940           49.00          1200.0                            .250
                90TH
      SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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NAQUADAT SUMMARY REPORT JAN 08, 1986
INDUSTRIAL MONITORING

STATION 20AL05EB6200 LAT. 53D 43M 10S LONG. 113D 10M 26S PR 3 UTM 12 356550E 5954300N FOR APR 20, 1983 TO JUL 17, 1984
THIO-PET CHEMICALS LTD FT SASK. POND WATER GRAB
SE S3 T55 R22 W4M

SUBM ID	07105L NITROGEN DISSOLVED NO3 & NO2 N MG/L	07205L NITROGEN DISSOLVED NITRITE N MG/L	07562L NITROGEN DISSOLVED AMMONIA N MG/L	07021L NITROGEN TOTAL KJELDAHL N MG/L	07906L NITROGEN PARTICULATE TOTAL N MG/L	07905L NITROGEN PARTICULATE (CALCD.) N MG/L	15421L PHOSPHORUS TOTAL P MG/L	97160S DISCHARGE INSTANT M3/S
SAMPLES(FLAGS)	4(0)	4(0)	4(0)	4(0)	4(0)		4(0)	
LOW	1.92	.17	1.130	4.300	.10		.062	
HIGH	10.200	.520	10.400	15.200	.65		.310	
AVERAGE	6.793	.325	4.465	8.150	.378		.181	
STD.DEV.	3.774	.145	4.367	5.142	.264		.103	
PERCNT:10TH								
25TH	3.835	.235	1.180	4.325	.155		.106	
MEDIAN 50TH	7.525	.305	3.165	6.550	.380		.175	
75TH	9.750	.415	7.750	11.975	.600		.255	
90TH								
SECONDARY CODE								

SUBM ID	10474L RESIDUE TOTAL MG/L	10407L RESIDUE NONFILTRABLE MG/L	10511L RESIDUE VOLATILE NONFILTR. (CALCD.) MG/L	10453L RESIDUE FILTRABLE MG/L	14101L SILICA REACTIVE SIO2 MG/L	97160S DISCHARGE INSTANT M3/S	97163S DISCHARGE DAILY MEAN CFS
SAMPLES(FLAGS)	4(0)	4(0)		4(0)	4(0)		
LOW	1388.0	7.		1360.0	.7		
HIGH	2682.0	28.0		2670.0	3.9		
AVERAGE	1928.8	17.5		1912.5	2.15		
STD.DEV.	610.9	8.6		617.8	1.38		
PERCNT:10TH							
25TH	1433.0	12.0		1410.0	1.10		
MEDIAN 50TH	1822.5	17.5		1810.0	2.00		
75TH	2424.5	23.0		2415.0	3.20		
90TH							
SECONDARY CODE					02L		

SUBM ID	00205L TOTAL DISSOLVED SOLIDS MG/L	02074L TURBIDITY NTU	06537L PHENOLIC MATERIAL PHENOL MG/L	06524L OIL AND GREASE MG/L	02001L ODOUR THRESHOLD NUMBER TON	16101L SULPHIDE DISSOLVED S MG/L	10701L SURFACT. N-ALKYL SULPHNTS. LAS MG/L	06608L CYANIDE CN MG/L
SAMPLES(FLAGS)	4(0)	2(0)	4(0)	4(0)			1(0)	
LOW	1009.0	1.5	.008	.320			.30	
HIGH	1986.8	2.5	.027	.700			.30	
AVERAGE	1394.2	2.0	.015	.580				
STD.DEV.	428.4	.7	.009	.180				
PERCNT:10TH								
25TH	1089.0		.009	.460				
MEDIAN 50TH	1290.5	2.0	.013	.650				
75TH	1699.4		.022	.700				
90TH								
SECONDARY CODE								

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0007 -  0009 PAGE 151                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB6200    LAT. 53D 43M 10S  LONG. 113D 10M 26S   PR 3   UTM 12 356550E 5954300N  FOR APR 20, 1983 TO JUL 17, 1984
THIO-PET CHEMICALS LTD FT SASK.          POND WATER GRAB
SE S3 T55 R22 W4M

                          08304L       08202L       06107L       06154L       06001L       06051L       06006L       06905L
                          OXYGEN       OXYGEN       CARBON       CARBON       CARBON       CARBON       CARBON       CARBON
                           TOTAL      BIOCHEM.     DISSOLVED    DISSOLVED      TOTAL        TOTAL       TOTAL      PARTICULATE
                            COD      DEMAND-BOD     ORGANIC     INORGANIC     ORGANIC     INORGANIC                   TOTAL
                  SUBM      O2           O2           C            C            C            C            C           C
                   ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             4(0)         1(0)         4(0)         4(0)                                               4(0)
           LOW             37.4         15.0          9.7         12.8                                                .95
          HIGH             77.2         15.0         19.0         26.0                                               3.30
       AVERAGE             55.4                      14.67        20.32                                              2.13
      STD.DEV.             16.5                       4.25         6.37                                              1.26
  PERCNT:10TH
          25TH             44.3                      11.20        15.05                                              1.04
   MEDIAN 50TH             53.5                      15.00        21.25                                              2.13
          75TH             66.5                      18.15        25.60                                              3.21
          90TH
SECONDARY CODE

                          24101L       24009L       24302L       80015L       80011L       27009L       27302L       47304L
                         CHROMIUM     CHROMIUM     CHROMIUM      MERCURY      MERCURY      COBALT       COBALT       SILVER
                        HEXAVALENT     TOTAL       EXTRBLE.      TOTAL        TOTAL        TOTAL       EXTRBLE.     EXTRBLE.

                  SUBM      CR           CR           CR           HG           HG           CO           CO           AG
                   ID     MG/L         MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             4(4)         4(0)                      4(4)                      4(0)
           LOW             L.001        .009                      L.0001                    .013
          HIGH             L.001        .012                      L.0001                    .098
       AVERAGE                          .011                                                .052
      STD.DEV.                          .001                                                .035
  PERCNT:10TH
          25TH             L.001        .010                      L.0001                    .028
   MEDIAN 50TH             L.001        .011                      L.0001                    .048
          75TH             L.001        .012                      L.0001                    .076
          90TH
SECONDARY CODE

                          29009L       29305L       28009L       28302L       48009L       48302L       82009L       82302L
                          COPPER       COPPER       NICKEL       NICKEL       CADMIUM      CADMIUM       LEAD         LEAD
                           TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.

                  SUBM      CU           CU           NI           NI           CD           CD           PB           PB
                   ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)             4(0)                      4(0)                      4(0)                      1(1)         3(2)
           LOW             .005                      .234                      .002                      L.003        L.003
          HIGH             .016                      .883                      .005                      L.003         .004
       AVERAGE             .011                      .499                      .004                                    .003*
      STD.DEV.             .005                      .283                      .001                                    .001*
  PERCNT:10TH
          25TH             .008                      .292                      .003
   MEDIAN 50TH             .011                      .439                      .004                                   L.003
          75TH             .014                      .705                      .005
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE 152                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB6200    LAT. 53D 43M 10S  LONG. 113D 10M 26S   PR 3   UTM 12 356550E 5954300N  FOR APR 20, 1983 TO JUL 17, 1984
THIO-PET CHEMICALS LTD FT SASK.           POND WATER GRAB
SE S3 T55 R22 W4M

                         30009L       30305L       25003L       25304L       23009L       42304L       42009L       51003L
                          ZINC         ZINC       MANGANESE    MANGANESE    VANADIUM    MOLYBDENUM   MOLYBDENUM   ANTIMONY
                         TOTAL      EXTRBLE.       TOTAL      EXTRBLE.       TOTAL      EXTRBLE.       TOTAL        TOTAL

                  SUBM     ZN           ZN           MN           MN           V            MO           MO           SB
                   ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            4(0)                      4(0)                      4(0)                      4(0)
           LOW            .002                      .090                      .007                      .006
          HIGH            .012                      .439                      .016                      .025
       AVERAGE            .008                      .296                      .012                      .014
      STD.DEV.            .005                      .164                      .004                      .008
   PERCNT:10TH
          25TH            .005                      .164                      .009                      .008
    MEDIAN 50TH           .009                      .328                      .012                      .012
          75TH            .012                      .429                      .014                      .020
          90TH
SECONDARY CODE

                         33005L       33104L       34005L       34102L       13111L       13306L       04102L       04304L
                         ARSENIC      ARSENIC     SELENIUM     SELENIUM     ALUMINUM     ALUMINUM    BERYLLIUM    BERYLLIUM
                         TOTAL      DISSOLVED     TOTAL       DISSOLVED    DISSOLVED    EXTRBLE.     DISSOLVED    EXTRBLE.

                  SUBM     AS           AS           SE           SE           AL           AL           BE           BE
                   ID     MG/L         MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            3(0)                      2(2)                                   4(1)                      4(4)
           LOW            .0003                     L.0002                                 L.020                     L.001
          HIGH            .0009                     L.0002                                 .096                      L.001
       AVERAGE            .0006                                                            .045*
      STD.DEV.            .0003                                                            .035*
   PERCNT:10TH
          25TH                                                                             .022*                     L.001
    MEDIAN 50TH           .0007                     L.0002                                 .032                      L.001
          75TH                                                                             .067                      L.001
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 153                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB6403    LAT. 53D 43M 26S  LONG. 113D 10M 27S   PR 3   UTM 12 356550E 5954800N  FOR FEB 16, 1983 TO JUL 18, 1984
UNION CARBIDE CANADA LTD FT SASK           COOLING WATER GRAB
SW S3 T55 R22 W4M

                       02061F         10301L         10301F        10151L         10101L        02041L         97160S         97163S
                     TEMPERATURE        PH             PH        ALKALINITY     ALKALINITY     SPECIFIC     DISCHARGE      DISCHARGE
                     OF WATER                                       PHENOL         TOTAL       CONDUCT.        INSTANT        DAILY
                                                                  PHTHALEIN                                                   MEAN
                SUBM                                                CACO3          CACO3
                 ID     DEG.C        PH UNITS       PH UNITS        MG/L           MG/L          US/CM          M3/S           CFS
SAMPLES(FLAGS)           8(0)          8(0)                         8(1)           8(0)          8(0)                         3(0)
           LOW             11.5           7.6                           .0            86.         1481.                         .035
          HIGH             21.0          8.50                         13.3           307.         1892.                          .05
       AVERAGE             15.8                                        4.2*         213.8         1706.                        .0417
      STD.DEV.              3.0                                        5.1*          76.4          144.                        .0076
   PERCNT:10TH
          25TH             13.5          7.90                           .0          160.0         1594.
   MEDIAN 50TH             16.5          8.35                          2.1*         223.3         1727.                          .04
          75TH             17.0          8.40                          8.0          275.3         1818.
          90TH
SECONDARY CODE

                       06201L       06202L           06301L        20103L         20105L        10602L        10604L          97160S
                      BICARBONT.    BICARBONT.      CARBONATE        CALCIUM       CALCIUM      HARDNESS       HARDNESS     DISCHARGE
                      (CALCD.)      (CALCD.)        (CALCD.)      DISSOLVED      DISSOLVED       TOTAL          TOTAL       INSTANT
                                                                                  (CALCD.)     (CALCD.)
                SUBM      HCO3         HCO3            CO3          CA              CA           CACO3         CACO3
                 ID   MG/L             MG/L           MG/L          MG/L           MG/L          MG/L          MG/L           M3/S
SAMPLES(FLAGS)           8(1)          5(0)           8(1)          8(0)           1(0)          8(0)
           LOW             105.          207.             0.         202.0          236.2         739.1
          HIGH             352.          331.            16.          285.          236.2        1028.7
       AVERAGE             250.*        273.              5.*       238.8                        882.8
      STD.DEV.              84.*         50.              6.*        26.4                         91.7
   PERCNT:10TH
          25TH             195.          235.             0.         220.5                        838.8
   MEDIAN 50TH             263.          291.             3.         238.5                        873.4
          75TH             316.          300.            10.         252.5                        935.2
          90TH
SECONDARY CODE                                                     10L

                        11103L        12102L         19103L        09107L         17203L        16306L         26009L        26304L
                        SODIUM      MAGNESIUM      POTASSIUM      FLUORIDE      CHLORIDE       SULPHATE         IRON          IRON
                       DISSOLVED    DISSOLVED      DISSOLVED      DISSOLVED      DISSOLVED     DISSOLVED       TOTAL        EXTRBLE.

                SUBM      NA           MG             K             F              CL             SO4           FE            FE
                 ID      MG/L          MG/L           MG/L          MG/L           MG/L           MG/L         MG/L           MG/L
SAMPLES(FLAGS)           8(0)          8(0)           8(0)          8(0)           8(0)          8(0)                         8(0)
           LOW              32.          57.0            4.9           .23            51.         390.0                         .500
          HIGH              58.           80.           16.2          1.06         145.00          750.                         1.67
       AVERAGE             43.9          69.6           8.92          .711         100.88         620.3                         .965
      STD.DEV.             10.0           7.1           3.58          .246          30.75         136.9                         .423
   PERCNT:10TH
          25TH             35.5          66.5           6.15          .630          80.00         513.5                         .540
   MEDIAN 50TH             42.0          68.5           9.00          .735         105.50         675.0                         .975
          75TH             53.0          75.0          10.00          .835         120.00         722.5                        1.260
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 154                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                          INDUSTRIAL MONITORING
STATION 20AL05EB6403    LAT. 53D 43M 26S  LONG. 113D 10M 27S   PR 3   UTM 12 356550E 5954800N  FOR FEB 16, 1983 TO JUL 18, 1984
UNION CARBIDE CANADA LTD FT SASK          COOLING WATER GRAB
SW S3 T55 R22 W4M
                          07105L      07205L      07562L      07021L      07906L      07905L      15421L      97160S
                          NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    PHOSFHORUS  DISCHARGE
                          DISSOLVED   DISSOLVED   DISSOLVED   TOTAL       PARTICULATE PARTICULATE TOTAL        INSTANT
                          NO3 & NO2   NITRITE     AMMONIA     KJELDAHL    TOTAL       (CALCD.)
                 SUBM     N           N           N           N           N           N           P
                 ID       MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)            8(0)        8(4)        8(0)        8(0)        8(1)                    8(0)
           LOW            1.93        L.05        .028        1.020       L.01                    1.200
          HIGH            7.20        .88         13.100      15.250      .640                    3.960
       AVERAGE            5.293       .171*       3.050       5.285       .314*                   1.817
      STD.DEV.            1.896       .288*       4.884       5.596       .234*                   .915
   PERCNT:10TH
          25TH            3.880       L.050       .165        1.680       .065                    1.290
   MEDIAN 50TH            5.750       .060*       .460        2.525       .410                    1.455
          75TH            6.975       .110        5.010       8.800       .455                    1.945
          90TH
SECONDARY CODE

                          10474L      10407L      10511L      10453L      14101L      97160S      97163S
                          RESIDUE     RESIDUE     RESIDUE     RESIDUE     SILICA      DISCHARGE   DISCHARGE
                          TOTAL       NONFILTRABLE VOLATILE   FILTRABLE   REACTIVE    INSTANT     DAILY
                                                  NONFILTR.                                       MEAN
                 SUBM                             (CALCD.)                SIO2
                 ID       MG/L        MG/L        MG/L        MG/L        MG/L        M3/S        CFS
SAMPLES(FLAGS)            8(0)        8(0)                    8(0)        8(0)                    3(0)
           LOW            1423.0      23.0                    1400.       10.7                    .035
          HIGH            1974.       58.0                    1920.       21.4                    .05
       AVERAGE            1623.1      41.9                    1581.3      16.79                   .0417
      STD.DEV.            193.6       15.3                    185.0       4.34                    .0076
   PERCNT:10TH
          25TH            1468.5      24.0                    1430.0      12.85
   MEDIAN 50TH            1561.0      49.5                    1520.0      17.35                   .04
          75TH            1764.5      53.5                    1715.0      20.90
          90TH
SECONDARY CODE                                                            02L

                          00205L      02074L      06537L      06524L      02001L      16101L      10701L      06608L
                          TOTAL       TURBIDITY   PHENOLIC    OIL AND     ODOUR       SULPHIDE    SURFACT.    CYANIDE
                          DISSOLVED               MATERIAL    GREASE      THRESHOLD   DISSOLVED   N-ALKYL
                          SOLIDS                                          NUMBER                  SULPHNTS.
                 SUBM                             PHENOL                              S           LAS         CN
                 ID       MG/L        NTU         MG/L        MG/L        TON         MG/L        MG/L        MG/L
SAMPLES(FLAGS)            8(0)        2(0)        8(0)        8(0)                                            3(0)
           LOW            990.2       25.0        .005        .300                                            .004
          HIGH            1442.       35.0        .019        .7                                              .045
       AVERAGE            1234.1      30.0        .012        .513                                            .0273
      STD.DEV.            157.2       7.1         .004        .136                                            .0211
   PERCNT:10TH
          25TH            1108.3                  .010        .400
   MEDIAN 50TH            1264.5      30.0        .013        .550                                            .033
          75TH            1347.5                  .015        .600
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE 155                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB6403    LAT. 53D 43M 26S  LONG. 113D 10M 27S   PR 3   UTM 12 356550E 5954800N  FOR FEB 16, 1983 TO JUL 18, 1984
UNION CARBIDE CANADA LTD FT SASK          COOLING WATER GRAB
SW S3 T55 R22 W4M

                       08304L      08202L       06107L      06154L       06001L      06051L       06006L      06905L
                       OXYGEN      OXYGEN       CARBON      CARBON       CARBON      CARBON       CARBON      CARBON
                        TOTAL      BIOCHEM.     DISSOLVED   DISSOLVED    TOTAL       TOTAL       TOTAL        PARTICULATE
                         COD       DEMAND-BOD   ORGANIC     INORGANIC    ORGANIC     INORGANIC                 TOTAL
                  SUBM   02           02           C           C            C           C            C           C
                  ID     MG/L        MG/L         MG/L        MG/L         MG/L        MG/L         MG/L        MG/L
SAMPLES(FLAGS)           8(0)        3(0)         8(0)        8(0)                                             8(1)
           LOW            6.1         2.8         10.2        18.0                                             L.01
          HIGH           93.2        11.4         33.0        72.0                                             5.28
       AVERAGE           55.5         7.23        21.59       48.26                                            2.91*
      STD.DEV.           31.3         4.31         9.40       18.65                                            1.89*
   PERCNT:10TH
          25TH           38.7                     13.75       34.50                                            1.25
   MEDIAN 50TH           45.2         7.5         19.50       49.95                                            3.25
          75TH           88.4                     31.50       63.60                                            4.50
          90TH
SECONDARY CODE

                       24101L      24009L       24302L      80015L       80011L      27009L       27302L      47304L
                       CHROMIUM    CHROMIUM     CHROMIUM    MERCURY      MERCURY     COBALT       COBALT      SILVER
                       HEXAVALENT  TOTAL         EXTRBLE.   TOTAL        TOTAL       TOTAL        EXTRBLE.    EXTRBLE.

                  SUBM   CR          CR           CR          HG           HG          CO           CO          AG
                  ID     MG/L        MG/L         MG/L        MG/L         UG/L        MG/L         MG/L        MG/L
SAMPLES(FLAGS)           5(5)        8(0)                     8(8)                     8(0)
           LOW           L.001        .012                    L.0001                    .005
          HIGH           L.001        .018                    L.0001                    .008
       AVERAGE                        .015                                              .007
      STD.DEV.                        .002                                              .001
   PERCNT:10TH
          25TH           L.001        .013                    L.0001                    .006
   MEDIAN 50TH           L.001        .015                    L.0001                    .006
          75TH           L.001        .017                    L.0001                    .008
          90TH
SECONDARY CODE

                       29009L      29305L       28009L      28302L       48009L      48302L       82009L      82302L
                       COPPER      COPPER       NICKEL      NICKEL       CADMIUM     CADMIUM      LEAD        LEAD
                        TOTAL      EXTRBLE.     TOTAL       EXTRBLE.     TOTAL       EXTRBLE.     TOTAL       EXTRBLE.

                  SUBM   CU          CU           NI          NI           CD          CD           PB          PB
                  ID     MG/L        MG/L         MG/L        MG/L         MG/L        MG/L         MG/L        MG/L
SAMPLES(FLAGS)           8(0)                     8(0)                     8(0)                                7(1)
           LOW            .028                     .003                     .002                               L.003
          HIGH            .155                     .050                     .008                                .010
       AVERAGE            .073                     .026                     .005                                .006*
      STD.DEV.            .052                     .014                     .002                                .002*
   PERCNT:10TH
          25TH            .034                     .021                     .004                                .004
   MEDIAN 50TH            .042                     .025                     .004                                .006
          75TH            .124                     .032                     .006                                .008
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE 156                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB6403    LAT. 53D 43M 26S  LONG. 113D 10M 27S   PR 3   UTM 12 356550E 5954800N  FOR FEB 16, 1983 TO JUL 18, 1984
UNION CARBIDE CANADA LTD FT SASK          COOLING WATER GRAB
SW S3 T55 R22 W4M

                          30009L     30305L     25003L     25304L     23009L     42304L      42009L     51003L
                           ZINC       ZINC     MANGANESE  MANGANESE  VANADIUM  MOLYBDENUM  MOLYBDENUM  ANTIMONY
                          TOTAL     EXTRBLE.    TOTAL     EXTRBLE.    TOTAL     EXTRBLE.     TOTAL      TOTAL

                  SUBM     ZN         ZN         MN         MN          V         MO          MO         SB
                   ID     MG/L       MG/L       MG/L       MG/L       MG/L       MG/L        MG/L       MG/L
SAMPLES(FLAGS)            8(0)                  8(0)                  8(0)                   8(0)
           LOW            .076                  .040                  .008                   .005
          HIGH            .625                  .094                  .014                   .012
       AVERAGE            .247                  .069                  .011                   .009
      STD.DEV.            .175                  .021                  .002                   .003
   PERCNT:10TH
          25TH            .150                  .052                  .010                   .007
   MEDIAN 50TH            .195                  .067                  .011                   .008
          75TH            .292                  .090                  .013                   .012
          90TH
SECONDARY CODE

                          33005L     33104L     34005L     34102L     13111L     13306L      04102L     04304L
                          ARSENIC    ARSENIC   SELENIUM   SELENIUM   ALUMINUM   ALUMINUM   BERYLLIUM  BERYLLIUM
                          TOTAL     DISSOLVED  TOTAL      DISSOLVED  DISSOLVED  EXTRBLE.   DISSOLVED   EXTRBLE.

                  SUBM     AS         AS         SE         SE         AL         AL          BE         BE
                   ID     MG/L       MG/L       MG/L       MG/L       UG/L       MG/L        MG/L       MG/L
SAMPLES(FLAGS)            6(0)                  5(5)                             8(0)                   8(8)
           LOW            .0470                 L.0002                           .130                   L.001
          HIGH            .0800                 L.0002                           2.000                  L.001
       AVERAGE            .0698                                                  1.210
      STD.DEV.            .0124                                                  .762
   PERCNT:10TH
          25TH            .0670                 L.0002                           .446                   L.001
   MEDIAN 50TH            .0725                 L.0002                           1.415                  L.001
          75TH            .0800                 L.0002                           1.915                  L.001
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 - 0003 PAGE 157

NAQUADAT SUMMARY REPORT JAN 08, 1986
INDUSTRIAL MONITORING

STATION 20AL05EB6404 LAT. 53D 43M 26S LONG. 113D 10M 27S PR 3 UTM 12 356550E 5954800N FOR JUL 27, 1983 TO JUL 17, 1984
UNION CARBIDE CANADA LTD FT SASK COOLING WATER COMP.
SW S3 T55 R22 W4M

	02061F TEMPERATURE OF WATER	10301L PH	10301F PH	10151L ALKALINITY PHENOL PHTHALEIN	10101L ALKALINITY TOTAL	02041L SPECIFIC CONDUCT.	97160S DISCHARGE INSTANT	97163S DISCHARGE DAILY MEAN
SUBM ID	DEG.C	PH UNITS	PH UNITS	CACO3 MG/L	CACO3 MG/L	US/CM	M3/S	CFS
SAMPLES(FLAGS)		2(0)		2(0)	2(0)	2(0)		1(0)
LOW		7.9		.0	166.	1600.		.07
HIGH		8.60		18.0	295.9	1815.		.07
AVERAGE				9.0	230.9	1708.		
STD.DEV.				12.7	91.8	152.		
PERCNT:10TH								
25TH								
MEDIAN 50TH		8.25		9.0	230.9	1708.		
75TH								
90TH								
SECONDARY CODE								

	06201L BICARBONT. (CALCD.)	06202L BICARBONT. (CALCD.)	06301L CARBONATE (CALCD.)	20103L CALCIUM DISSOLVED	20105L CALCIUM DISSOLVED (CALCD.)	10602L HARDNESS TOTAL (CALCD.)	10604L HARDNESS TOTAL	97160S DISCHARGE INSTANT
SUBM ID	HCO3 MG/L	HCO3 MG/L	CO3 MG/L	CA MG/L	CA MG/L	CACO3 MG/L	CACO3 MG/L	M3/S
SAMPLES(FLAGS)	2(0)	1(0)	2(0)	2(0)	1(0)	2(0)		
LOW	202.	317.	0.	225.	241.5	841.8		
HIGH	317.	317.	22.	242.0	241.5	884.2		
AVERAGE	260.		11.	233.5		863.0		
STD.DEV.	81.		15.	12.0		30.0		
PERCNT:10TH								
25TH								
MEDIAN 50TH	260.		11.	233.5		863.0		
75TH								
90TH								
SECONDARY CODE				10L				

	11103L SODIUM DISSOLVED	12102L MAGNESIUM DISSOLVED	19103L POTASSIUM DISSOLVED	09107L FLUORIDE DISSOLVED	17203L CHLORIDE DISSOLVED	16306L SULPHATE DISSOLVED	26009L IRON TOTAL	26304L IRON EXTRBLE.
SUBM ID	NA MG/L	MG MG/L	K MG/L	F MG/L	CL MG/L	SO4 MG/L	FE MG/L	FE MG/L
SAMPLES(FLAGS)	2(0)	2(0)	2(0)	2(0)	2(0)	2(0)		2(0)
LOW	35.0	68.	5.10	.740	108.	400.0		.540
HIGH	54.	68.0	10.5	.75	145.00	700.		1.15
AVERAGE	44.5	68.0	7.80	.745	126.50	550.0		.845
STD.DEV.	13.4	.0	3.82	.007	26.16	212.1		.431
PERCNT:10TH								
25TH								
MEDIAN 50TH	44.5	68.0	7.80	.745	126.50	550.0		.845
75TH								
90TH								
SECONDARY CODE								

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0004 -  0006 PAGE 158                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB6404     LAT. 53D 43M 26S  LONG. 113D 10M 27S   PR 3   UTM 12 356550E 5954800N  FOR JUL 27, 1983 TO JUL 17, 1984
UNION CARBIDE CANADA LTD FT SASK           COOLING WATER COMP.
SW S3 T55 R22 W4M

                          07105L       07205L       07562L       07021L       07906L       07905L       15421L       97160S
                         NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN    PHOSPHORUS   DISCHARGE
                         DISSOLVED    DISSOLVED    DISSOLVED     TOTAL     PARTICULATE  PARTICULATE    TOTAL       INSTANT
                         NO3 & NO2     NITRITE      AMMONIA     KJELDAHL      TOTAL       (CALCD.)
                 SUBM       N            N            N            N            N            N            P
                  ID      MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         M3/S
SAMPLES(FLAGS)            2(0)         2(0)         2(0)         2(0)         2(0)                      2(0)
           LOW            6.75         .130        1.680        3.000         .360                     1.380
          HIGH            7.050        .85        10.500       12.400         .61                      1.530
       AVERAGE            6.900        .490        6.090        7.700         .485                     1.455
      STD.DEV.             .212        .509        6.237        6.647         .177                      .106
   PERCNT:10TH
          25TH
    MEDIAN 50TH           6.900        .490        6.090        7.700         .485                     1.455
          75TH
          90TH
SECONDARY CODE

                          10474L       10407L       10511L       10453L       14101L       97160S       97163S
                         RESIDUE      RESIDUE      RESIDUE      RESIDUE      SILICA     DISCHARGE    DISCHARGF
                          TOTAL    NONFILTRABLE   VOLATILE    FILTRABLE    REACTIVE     INSTANT       DAILY
                                                 NONFILTR.                                             MEAN
                 SUBM                            (CALCD.)                    SIO2
                  ID      MG/L         MG/L        MG/L         MG/L         MG/L         M3/S         CFS
SAMPLES(FLAGS)            2(0)         2(0)                     2(0)         2(0)                      1(0)
           LOW           1612.0        52.0                    1560.0        11.70                      .07
          HIGH           1866.         56.                     1810.         18.9                       .07
       AVERAGE           1739.0        54.0                    1685.0        15.30
      STD.DEV.            179.6         2.8                     176.8         5.09
   PERCNT:10TH
          25TH
    MEDIAN 50TH          1739.0        54.0                    1685.0        15.30
          75TH
          90TH
SECONDARY CODE                                                              02L

                          00205L       02074L       06537L       06524L       02001L       16101L       10701L       06608L
                          TOTAL      TURBIDITY     PHENOLIC     OIL AND       ODOUR       SULPHIDE     SURFACT.      CYANIDE
                         DISSOLVED                 MATERIAL    GREASE       THRESHOLD    DISSOLVED    N-ALKYL
                          SOLIDS                                            NUMBER                   SULPHNTS.
                 SUBM                              PHENOL                                   S           LAS          CN
                  ID      MG/L         NTU          MG/L         MG/L         TON          MG/L         MG/L         MG/L
SAMPLES(FLAGS)            2(0)         1(0)         2(0)         2(0)
           LOW           1103.7        35.0         .011         .300
          HIGH           1295.         35.0         .016        1.1
       AVERAGE           1199.3                     .014         .700
      STD.DEV.            135.3                     .004         .566
   PERCNT:10TH
          25TH
    MEDIAN 50TH          1199.3                     .014         .700
          75TH
          90TH
SECONDARY CODE
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REQUEST 0007 -  0009 PAGE 159
                                                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                         INDUSTRIAL MONITORING
STATION 20AL05EB6404    LAT. 53D 43M 26S  LONG. 113D 10M 27S   PR 3   UTM 12 356550E 5954800N  FOR JUL 27, 1983 TO JUL 17, 1984
UNION CARBIDE CANADA LTD FT SASK                  COOLING WATER COMP.
SW S3 T55 R22 W4M

                      08304L       08202L       06107L       06154L       06001L       06051L       06006L       06905L
                      OXYGEN       OXYGEN       CARBON       CARBON       CARBON       CARBON       CARBON       CARBON
                       TOTAL      BIOCHEM.    DISSOLVED    DISSOLVED      TOTAL        TOTAL       TOTAL      PARTICULATE
                        COD      DEMAND-BOD    ORGANIC     INORGANIC     ORGANIC     INORGANIC                   TOTAL
                SUBM    O2           O2           C            C            C            C            C            C
                 ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          2(0)                     2(0)         2(0)                                               2(0)
           LOW          44.5                     15.20        36.0                                                2.41
          HIGH          86.8                     29.0         68.40                                               5.96
       AVERAGE          65.6                     22.10        52.20                                               4.18
      STD.DEV.          29.9                      9.76        22.91                                               2.51
  PERCNT:10TH
          25TH
   MEDIAN 50TH          65.6                     22.10        52.20                                               4.18
          75TH
          90TH
SECONDARY CODE

                      24101L       24009L       24302L       80015L       80011L       27009L       27302L       47304L
                     CHROMIUM     CHROMIUM     CHROMIUM     MERCURY      MERCURY      COBALT       COBALT       SILVER
                    HEXAVALENT     TOTAL       EXTRBLE.      TOTAL        TOTAL        TOTAL       EXTRBLE.     EXTRBLE.
                SUBM    CR          CR           CR           HG           HG           CO           CO           AG
                 ID    MG/L        MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)                     2(0)                      2(2)                      2(0)
           LOW                      .012                     L.0001                     .006
          HIGH                      .017                     L.0001                     .007
       AVERAGE                      .015                                                .007
      STD.DEV.                      .004                                                .001
  PERCNT:10TH
          25TH
   MEDIAN 50TH                      .015                     L.0001                     .007
          75TH
          90TH
SECONDARY CODE

                      29009L       29305L       28009L       28302L       48009L       48302L       82009L       82302L
                      COPPER       COPPER       NICKEL       NICKEL      CADMIUM      CADMIUM        LEAD         LEAD
                      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.
                SUBM    CU           CU           NI           NI           CD           CD           PB           PB
                 ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          2(0)                     2(0)                      2(0)                                   2(1)
           LOW           .033                     .015                      .004                                  L.003
          HIGH           .130                     .033                      .005                                   .012
       AVERAGE           .082                     .024                      .005                                   .007*
      STD.DEV.           .069                     .013                      .001                                   .006*
  PERCNT:10TH
          25TH
   MEDIAN 50TH           .082                     .024                      .005                                   .007*
          75TH
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE 160                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 20AL05EB6404    LAT. 53D 43M 26S  LONG. 113D 10M 27S   PR 3   UTM 12 356550E 5954800N  FOR JUL 27, 1983 TO JUL 17, 1984
UNION CARBIDE CANADA LTD FT SASK          COOLING WATER COMP.
SW S3 T55 R22 W4M

                         30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                          ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM  ANTIMONY
                         TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL     EXTRBLE.     TOTAL       TOTAL

                  SUBM    ZN          ZN          MN          MN          V           MO          MO          SB
                   ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           2(0)                    2(0)                    2(0)                    2(0)
           LOW            .188                    .059                    .014                    .012
          HIGH            .332                    .085                    .017                    .013
       AVERAGE            .260                    .072                    .016                    .013
      STD.DEV.            .102                    .018                    .002                    .001
   PERCNT:10TH
          25TH
   MEDIAN 50TH            .260                    .072                    .016                    .013
          75TH
          90TH
SECONDARY CODE

                         33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                         ARSENIC     ARSENIC     SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                        TOTAL       DISSOLVED   TOTAL       DISSOLVED   DISSOLVED    EXTRBLE.   DISSOLVED    EXTRBLE.

                  SUBM    AS          AS          SE          SE          AL          AL          BE          BE
                   ID    MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           2(0)                    1(1)                                2(0)                    2(2)
           LOW           .0152                   L.0002                               .489                   L.001
          HIGH           .0570                   L.0002                              1.830                   L.001
       AVERAGE           .0361                                                       1.159
      STD.DEV.           .0296                                                        .948
   PERCNT:10TH
          25TH
   MEDIAN 50TH           .0361                                                       1.159                   L.001
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 161                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                      INDUSTRIAL MONITORING
STATION 20AL05EB6800    LAT. 53D 44M 34S  LONG. 113D 11M  4S   PR 3   UTM 12 355950E 5956900N  FOR APR 30, 1980 TO JUL 19, 1984
DOW CHEMICAL OF CANADA LTD FT SASK        FINAL EFFLUENT GRAB
S2/11 T55 R22 W4M

                        02061F       10301L       10301F       10151L       10101L       02041L       97160S       97163S
                     TEMPERATURE       PH           PH       ALKALINITY   ALKALINITY    SPECIFIC    DISCHARGE    DISCHARGE
                      OF WATER                                 PHENOL        TOTAL      CONDUCT.     INSTANT       DAILY
                                                              PHTHALEIN                                            MEAN
                  SUBM                                          CACO3        CACO3
                   ID    DEG.C      PH UNITS     PH UNITS       MG/L         MG/L        US/CM        M3/S          CFS
SAMPLES(FLAGS)          15(0)        17(0)         4(0)        16(2)        17(0)        17(0)                     14(0)
           LOW            4.0          5.3          7.3           .0         146.         981.                      .654
          HIGH           22.5          9.6          9.8         80.0        386.8        8330.                     4.01
       AVERAGE           13.3                                    6.1*       274.5        3335.                     1.5317
      STD.DEV.            5.1                                   20.0*        61.9        1911.                      .8268
  PERCNT:10TH             8.0          6.64                       .0        175.0        1360.                      .70
          25TH            9.0          6.9          7.30          .0        227.0        1730.                     1.1
   MEDIAN 50TH           13.0          7.03         8.00          .0         284.        3573.                     1.4300
          75TH           17.           7.60         9.25         L.3         313.        3970.                     1.67
          90TH           21.0          8.7                      14.2         348.        6100.                     2.05
SECONDARY CODE

                        06201L       06202L       06301L       20103L       20105L       10602L       10604L       97160S
                      BICARBONT.   BICARBONT.   CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS    DISCHARGE
                       (CALCD.)     (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED      TOTAL        TOTAL       INSTANT
                                                                          (CALCD.)     (CALCD.)
                  SUBM   HCO3         HCO3         CO3           CA           CA         CACO3        CACO3
                   ID   MG/L          MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         M3/S
SAMPLES(FLAGS)          16(2)         5(0)        16(2)        14(0)         5(0)        12(0)         5(0)
           LOW           178.         271.           0.         43.0         24.6        160.9         144.
          HIGH           388.         472.          96.         190.        123.6        717.3         329.
       AVERAGE           311.*        357.           7.*        95.2         74.7        370.8        263.8
      STD.DEV.            65.*         84.          24.*        36.0         39.2        145.7         82.1
  PERCNT:10TH           Q212.                        0.         59.2                     223.2
          25TH           271.         277.           0.          77.         46.9        285.0         212.
   MEDIAN 50TH           329.         377.           0.         84.0         84.8        344.9        315.0
          75TH           366.         388.           0.         112.         93.7        440.8        319.0
          90TH           382.                       17.         126.                     491.7
SECONDARY CODE                                            11L 10L

                        11103L       12102L       19103L       09107L       17203L       16306L       26009L       26304L
                        SODIUM     MAGNESIUM    POTASSIUM     FLUORIDE     CHLORIDE     SULPHATE       IRON         IRON
                      DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL       EXTRBLE.

                  SUBM    NA           MG           K            F            CL          SO4           FE           FE
                   ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)          17(0)        17(0)        17(0)        17(0)        17(0)        17(0)         2(0)        14(0)
           LOW          141.0         13.0          2.7          .09        151.0         50.0         1.64          .13
          HIGH          1727.          59.         18.0          .42        2432.         375.         1.67         3.42
       AVERAGE          558.3         29.0         9.11         .259       765.71        184.3        1.655        1.476
      STD.DEV.          397.6         11.1         4.13         .090       608.98         78.9         .021          .909
  PERCNT:10TH           180.0         18.3          4.8          .17        190.0          90.                       .63
          25TH           244.          23.          5.9          .19         295.         145.                      .940
   MEDIAN 50TH           590.          26.          7.8          .25         770.        180.0        1.655        1.270
          75TH           670.          33.         12.2          .31         880.        223.0                      1.89
          90TH          1088.          43.         16.0          .40        1700.         293.                      3.10
SECONDARY CODE           11L          11L          11L       06L 05L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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                                              NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                 INDUSTRIAL MONITORING
STATION 20AL05EB6800    LAT. 53D 44M 34S  LONG. 113D 11M  4S   PR 3   UTM 12 355950E 5956900N  FOR APR 30, 1980 TO JUL 19, 1984
DOW CHEMICAL OF CANADA LTD FT SASK        FINAL EFFLUENT GRAB
S2/11 T55 R22 W4M

                          07105L      07205L      07562L      07021L      07906L      07905L      15421L      97160S
                         NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN   PHOSPHORUS  DISCHARGE
                         DISSOLVED   DISSOLVED   DISSOLVED    TOTAL    PARTICULATE PARTICULATE   TOTAL       INSTANT
                         NO3 & NO2   NITRITE     AMMONIA     KJELDAHL     TOTAL      (CALCD.)
                SUBM        N           N           N           N           N           N           P
                 ID        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)            16(13)      16(14)      16(0)       17(0)       12(0)                   17(0)
          LOW               .004        .004        .070        1.4          .4                      .055
         HIGH              1.61         .17        8.200      14.500       4.060                   5.14
      AVERAGE               .211*       .051*      2.163       5.738       2.161                   1.936
     STD.DEV.               .466*       .034*      2.551       3.499       1.201                   1.440
  PERCNT:10TH             L.02        L.02          .150       1.70         .75                     .480
         25TH             L.050       L.050         .602       3.400       1.100                   1.050
   MEDIAN 50TH            L.050       L.050        1.330       4.500       2.080                   2.000
         75TH             L.050       L.050        2.450       7.750       3.320                   2.300
         90TH              1.16       L.050        8.000      10.000       3.560                   5.000
SECONDARY CODE            10L         06L         61L         15L                             19L 06L

                          10474L      10407L      10511L      10453L      14101L      97160S      97163S
                          RESIDUE     RESIDUE     RESIDUE     RESIDUE     SILICA     DISCHARGE   DISCHARGE
                           TOTAL   NONFILTRABLE  VOLATILE   FILTRABLE    REACTIVE     INSTANT      DAILY
                                                NONFILTR.                                         MEAN
                SUBM                            (CALCD.)                  SIO2
                 ID       MG/L        MG/L        MG/L        MG/L        MG/L        M3/S        CFS
SAMPLES(FLAGS)            16(0)       17(0)        1(0)       13(0)       17(0)                   14(0)
          LOW              972.0         7.         37.0      1080.          4.2                    .654
         HIGH             5587.        219.         37.0      3570.         15.3                   4.01
      AVERAGE             2264.6        78.3                  2106.9         7.56                  1.5317
     STD.DEV.             1189.7        58.6                   773.9         2.64                   .8268
  PERCNT:10TH             1125.0        30.                   1140.          5.0                    .70
         25TH             1387.5        45.0                  1540.          6.0                   1.1
   MEDIAN 50TH            2049.5        63.                   2110.          7.3                   1.4300
         75TH             2729.5        90.                   2400.          8.5                   1.67
         90TH             3646.        218.0                  3320.         10.0                   2.05
SECONDARY CODE            71L         01L                     51L         02L

                          00205L      02074L      06537L      06524L      02001L      16101L      10701L      06608L
                           TOTAL     TURBIDITY    PHENOLIC    OIL AND      ODOUR     SULPHIDE    SURFACT.     CYANIDE
                         DISSOLVED                MATERIAL    GREASE     THRESHOLD   DISSOLVED   N-ALKYL
                          SOLIDS                                          NUMBER                 SULPHNTS.
                SUBM                              PHENOL                                 S          LAS          C
                 ID        MG/L        NTU         MG/L        MG/L        TON         MG/L        MG/L        h
SAMPLES(FLAGS)            16(0)       14(0)       17(0)       17(0)       12(0)        1(0)       13(2)          ))
          LOW              594.          1.0        .025        0.             1.         .35       L.02          73
         HIGH             4664.         37.0        .145        6.0        10000.         .35       5.15        .0090
      AVERAGE             1815.8        18.8        .060        1.712       1768.                   2.283*      .0067
     STD.DEV.             1071.6        11.8        .042        1.311       3856.                   1.960*      .0026
  PERCNT:10TH              786.          3.5        .026         .500          1.                   L.02
         25TH              999.5        10.0        .029        1.1            1.                    .34        .004
   MEDIAN 50TH            1599.6        16.0        .044        1.3            4.                   2.00        .0075
         75TH             1978.5        30.0        .070        2.0          550.                   4.1         .009
         90TH             3301.         35.0        .145        2.700      10000.                   4.77
SECONDARY CODE                        73L                     21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE 163                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 20AL05EB6800    LAT. 53D 44M 34S  LONG. 113D 11M  4S   PR 3   UTM 12 355950E 5956900N  FOR APR 30, 1980 TO JUL 19, 1984
DOW CHEMICAL OF CANADA LTD FT SASK          FINAL EFFLUENT GRAB
S2/11 T55 R22 W4M

                          08304L      08202L      06107L      06154L      06001L      06051L      06006L      06905L
                          OXYGEN      OXYGEN      CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                           TOTAL     BIOCHEM.    DISSOLVED   DISSOLVED     TOTAL       TOTAL     TOTAL      PARTICULATE
                            COD     DEMAND-BOD    ORGANIC    INORGANIC    ORGANIC    INORGANIC               TOTAL
                   SUBM     O2           O2       C           C           C           C           C           C
                    ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            17(0)       14(0)       12(0)       12(0)        4(0)        1(0)        1(0)       12(0)
           LOW              80.         35.0        21.         31.0        21.         55.         76.         3.74
          HIGH             989.7       380.0       314.0         82.       138.0        55.         76.        33.82
       AVERAGE             367.4       147.74      120.62       60.48       67.82                               14.09
      STD.DEV.             209.7       114.98       84.68       18.16       49.63                                7.91
   PERCNT:10TH             107.0        40.0        50.         37.0                                             8.40
          25TH             238.8        56.4        58.95       44.50       38.50                                9.64
    MEDIAN 50TH            343.0       107.00       95.95       63.85       56.15                               11.86
          75TH             444.0       177.5       151.00       76.55       97.15                               17.03
          90TH             521.0       370.0       233.20       80.                                             22.86
SECONDARY CODE            01L                                         07L 05L

                          24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                         CHROMIUM    CHROMIUM    CHROMIUM    MERCURY     MERCURY     COBALT      COBALT      SILVER
                        HEXAVALENT    TOTAL       EXTRBLE.    TOTAL       TOTAL       TOTAL      EXTRBLE.    EXTRBLE.

                   SUBM     CR          CR          CR          HG          HG          CO          CO          AG
                    ID    MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            13(10)      15(0)        1(0)       15(11)                  15(7)        2(2)        2(2)
           LOW            L.001        .005         .01       L.0001                   L.001       L.001       L.02
          HIGH              .02        .034         .01        .0006                   L.01        L.001       L.02
       AVERAGE             .003*       .013                    .0001*                   .003*
      STD.DEV.             .006*       .008                    .0001*                   .003*
   PERCNT:10TH            L.001        .007                   L.0001                   L.001
          25TH            L.001        .007                   L.0001                   L.001
    MEDIAN 50TH           L.001        .011                   L.0001                    .003       L.001       L.020
          75TH            L.001        .016                    .0001                    .004
          90TH              .01        .03                     .0001                   L.01
SECONDARY CODE

                          29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                          COPPER      COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM      LEAD        LEAD
                           TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.

                   SUBM     CU          CU          NI          NI          CD          CD          PB          PB
                    ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            15(0)        2(0)       15(2)        2(0)       15(10)       2(2)        7(5)       10(7)
           LOW             .007        .001        .019        .006       L.001       L.001       L.003       L.002
          HIGH             .085        .012        .043        .016        .013       L.001        .004       L.02
       AVERAGE             .029        .007        .029*       .011        .003*                   .003*       .007*
      STD.DEV.             .022        .008        .008*       .007        .004*                   .000*       .007*
   PERCNT:10TH             .011                   L.02                    L.001                               L.002
          25TH             .012                    .021                   L.001                   L.003       L.003
    MEDIAN 50TH            .020        .007        .026        .011       L.001       L.001       L.003        .003*
          75TH             .032                    .037                    .004                    .004        .006
          90TH             .062                    .039                   L.01                                L.020
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE 164                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 20AL05EB6800    LAT. 53D 44M 34S  LONG. 113D 11M  4S   PR 3   UTM 12 355950E 5956900N  FOR APR 30, 1980 TO JUL 19, 1984
DOW CHEMICAL OF CANADA LTD FT SASK        FINAL EFFLUENT GRAB
S2/11 T55 R22 W4M

                          30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                           ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                          TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                  SUBM     ZN          ZN          MN          MN          V           MO          MO          SB
                   ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           15(0)        2(0)       15(0)        2(0)       14(0)                   12(6)        2(1)
           LOW            .014        .040        .011        .13         .005                   L.001       L.001
          HIGH           1.86         .710        .229        .380        .07                     .216        .002
       AVERAGE            .425        .375        .147        .255        .030                    .044*       .0015*
      STD.DEV.            .537        .474        .060        .177        .020                    .072*       .0007*
   PERCNT:10TH            .046                    .053                    .008                   L.001
          25TH            .093                    .114                    .013                   L.001
   MEDIAN 50TH            .213        .375        .149        .255        .024                    .007        .0015*
          75TH            .486                    .192                    .047                    .063*
          90TH           1.48                     .223                    .05                     .149
SECONDARY CODE                                                           02L

                          33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                          ARSENIC     ARSENIC    SELENIUM    SELENIUM    ALUMINUM    ALUMINUM    BERYLLIUM   BERYLLIUM
                          TOTAL      DISSOLVED   TOTAL       DISSOLVED   DISSOLVED   EXTRBLE.    DISSOLVED    EXTRBLE.

                  SUBM     AS          AS          SE          SE          AL          AL          BE          BE
                   ID     MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            8(0)        2(0)        7(4)        2(2)        2(0)       11(0)        2(2)       12(11)
           LOW            .0090       .0017      L.0002      L.0002      1570.         .130       L.005       L.001
          HIGH            .024        .0057       .011       L.0002      1570.        1.210       L.005        .004
       AVERAGE            .0150       .0037       .0020*                 1570.00       .617                    .001*
      STD.DEV.            .0051       .0028       .0040*                    .00        .313                    .001*
   PERCNT:10TH                                                                         .269                   L.001
          25TH            .0107                  L.0002                                .363                   L.001
   MEDIAN 50TH            .0150       .0037      L.0002      L.0002      1570.00       .655       L.005       L.001
          75TH            .0178                   .002                                 .747                   L.001
          90TH                                                                         .926                   L.001
SECONDARY CODE                                    07L                                 02L                    02L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 165                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB6801    LAT. 53D 44M 34S  LONG. 113D 11M  4S   PR 3   UTM 12 355950E 5956900N  FOR MAR 25, 1981 TO JUL 19, 1984
DOW CHEMICAL OF CANADA LTD FT SASK         FINAL EFFLUENT COMP.
S2/11 T55 R22 W4M

                          02061F       10301L       10301F       10151L       10101L       02041L       97160S       97163S
                        TEMPERATURE      PH           PH       ALKALINITY   ALKALINITY    SPECIFIC    DISCHARGE    DISCHARGE
                        OF WATER                                 PHENOL       TOTAL      CONDUCT.     INSTANT       DAILY
                                                               PHTHALEIN                                             MEAN
                  SUBM                                           CACO3        CACO3
                    ID    DEG.C       PH UNITS     PH UNITS      MG/L         MG/L         US/CM        M3/S          CFS
SAMPLES(FLAGS)                          5(0)         1(0)         5(1)         5(0)         5(0)                      4(0)
           LOW                          6.56         7.8           .0        152.0        1400.                      1.1
          HIGH                          9.3          7.8         40.8        393.0        5730.                      4.01
       AVERAGE                                                    8.2*       287.0        2741.                      2.0825
      STD.DEV.                                                   18.2*        86.4        1742.                      1.3082
  PERCNT:10TH
          25TH                          6.9                        .0        290.         1620.                      1.3250
  MEDIAN  50TH                          7.40                       .0        296.0        2420.                      1.6100
          75TH                          7.6                       L.1        304.         2534.                      2.8400
          90TH
SECONDARY CODE

                          06201L       06202L       06301L       20103L       20105L       10602L       10604L       97160S
                        BICARBONT.   BICARBONT.   CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS     DISCHARGE
                         (CALCD.)     (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED      TOTAL        TOTAL       INSTANT
                                                                            (CALCD.)     (CALCD.)
                  SUBM    HCO3         HCO3          CO3          CA           CA          CACO3        CACO3
                    ID   MG/L          MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         M3/S
SAMPLES(FLAGS)            5(1)         2(0)         5(1)         4(0)         2(0)         3(0)         2(0)
           LOW           Q185.         186.           0.         71.0         45.4        262.5        200.
          HIGH            479.         479.          49.        124.0        123.6        478.4        289.0
       AVERAGE            330.*        332.          10.*        88.5         84.5        344.3        244.5
      STD.DEV.            114.*        208.          22.*        24.0         55.3        117.1         62.9
  PERCNT:10TH
          25TH            254.                        0.         75.0
  MEDIAN  50TH            361.         332.           0.         79.5         84.5        292.0        244.5
          75TH            371.                       Q0.        102.0
          90TH
SECONDARY CODE                                              11L 10L

                          11103L       12102L       19103L       09107L       17203L       16306L       26009L       26304L
                          SODIUM      MAGNESIUM    POTASSIUM    FLUORIDE     CHLORIDE     SULPHATE      IRON         IRON
                        DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED     TOTAL       EXTRBLE.

                  SUBM     NA           MG            K            F            CL          SO4           FE           FE
                    ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            5(0)         5(0)         5(0)         5(0)         5(0)         5(0)         1(0)         3(0)
           LOW           190.0         20.7         5.00          .19        144.0          95.         1.47         .840
          HIGH           1022.         41.0         19.0         .330        1304.         220.         1.47         1.19
       AVERAGE           448.6         25.3        10.34         .256       564.60        162.2         1.47        1.053
      STD.DEV.           338.1          8.8         5.67         .059       460.71         52.6                      .187
  PERCNT:10TH
          25TH           221.          21.0         7.10          .20        260.         129.0
  MEDIAN  50TH           350.0         21.          7.6           .28       430.00        159.0                      1.13
          75TH           460.0         23.         13.0           .28       685.00        208.0
          90TH
SECONDARY CODE           11L           11L          11L       06L 05L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 166                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                      INDUSTRIAL MONITORING
STATION 20AL05EB6801    LAT. 53D 44M 34S  LONG. 113D 11M  4S   PR 3   UTM 12 355950E 5956900N  FOR MAR 25, 1981 TO JUL 19, 1984
DOW CHEMICAL OF CANADA LTD FT SASK          FINAL EFFLUENT COMP.
S2/11 T55 R22 W4M

                            07105L      07205L      07562L      07021L      07906L      07905L      15421L      97160S
                            NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    PHOSPHORUS  DISCHARGE
                            DISSOLVED   DISSOLVED   DISSOLVED   TOTAL       PARTICULATE PARTICULATE TOTAL       INSTANT
                            NO3 & NO2   NITRITE     AMMONIA     KJELDAHL    TOTAL       (CALCD.)
                      SUBM  N           N           N           N           N           N           P
                      ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
      SAMPLES(FLAGS)        5(4)        5(4)        4(0)        5(0)        3(0)                    5(0)
                 LOW        .006        .006        .09         2.40        1.5                     .415
                HIGH        L.050       L.050       1.590       11.000      5.660                   3.04
             AVERAGE        .035*       .035*       .570        5.350       3.070                   1.491
            STD.DEV.        .021*       .021*       .692        3.561       2.260                   1.042
         PERCNT:10TH
                25TH        L.02        L.02        .145        2.6                                 .650
         MEDIAN 50TH        L.05        L.05        .300        4.250       2.05                    1.600
                75TH        L.05        L.05        .995        6.500                               1.750
                90TH
      SECONDARY CODE        10L         06L         61L         15L                                 19L 06L

                            10474L      10407L      10511L      10453L      14101L      97160S      97163S
                            RESIDUE     RESIDUE     RESIDUE     RESIDUE     SILICA      DISCHARGE   DISCHARGE
                            TOTAL    NONFILTRABLE   VOLATILE    FILTRABLE   REACTIVE    INSTANT     DAILY
                                                    NONFILTR.                                       MEAN
                      SUBM                          (CALCD.)                SIO2
                      ID    MG/L        MG/L        MG/L        MG/L        MG/L        M3/S        CFS
      SAMPLES(FLAGS)        4(0)        4(0)                    4(0)        5(0)                    4(0)
                 LOW        996.0       80.                     1050.       5.70                    1.1
                HIGH        2978.       108.                    2870.       7.80                    4.01
             AVERAGE        1709.3      93.8                    1762.5      6.70                    2.0825
            STD.DEV.        904.5       13.8                    779.0       .84                     1.3082
         PERCNT:10TH
                25TH        1063.0      82.0                    1275.0      6.3                     1.3250
         MEDIAN 50TH        1431.5      93.5                    1565.0      6.4                     1.6100
                75TH        2355.5      105.5                   2250.0      7.3                     2.8400
                90TH
      SECONDARY CODE        71L         01L                     51L         02L

                            00205L      02074L      06537L      06524L      02001L      16101L      10701L      06608L
                            TOTAL       TURBIDITY   PHENOLIC    OIL AND     ODOUR       SULPHIDE    SURFACT.    CYANIDE
                            DISSOLVED               MATERIAL    GREASE      THRESHOLD   DISSOLVED   N-ALKYL
                            SOLIDS                                          NUMBER                  SULPHNTS.
                      SUBM                          PHENOL                              S           LAS         CN
                      ID    MG/L        NTU         MG/L        MG/L        TON         MG/L        MG/L        MG/L
      SAMPLES(FLAGS)        4(0)        4(0)        5(0)        5(1)        3(0)                    3(0)
                 LOW        874.        18.0        .018        L1.0        1.                      .05
                HIGH        2795.       62.0        .130        4.3         10000.                  5.97
             AVERAGE        1507.3      32.0        .047        2.100*      3335.                   2.607
            STD.DEV.        888.2       20.2        .047        1.405*      5772.                   3.041
         PERCNT:10TH
                25TH        919.0       20.5        .020        1.100
         MEDIAN 50TH        1180.0      24.0        .034        1.4         4.                      1.80
                75TH        2095.5      43.5        .034        2.7
                90TH
      SECONDARY CODE                                            21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE 167                  NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                 INDUSTRIAL MONITORING
STATION 20AL05EB6801    LAT. 53D 44M 34S  LONG. 113D 11M  4S   PR 3   UTM 12 355950E 5956900N  FOR MAR 25, 1981 TO JUL 19, 1984
DOW CHEMICAL OF CANADA LTD FT SASK         FINAL EFFLUENT COMP.
S2/11 T55 R22 W4M

                         08304L      08202L      06107L      06154L      06001L      06051L      06006L      06905L
                         OXYGEN      OXYGEN      CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                          TOTAL     BIOCHEM.    DISSOLVED   DISSOLVED     TOTAL       TOTAL     TOTAL      PARTICULATE
                           COD     DEMAND-BOD    ORGANIC    INORGANIC    ORGANIC    INORGANIC                  TOTAL
                 SUBM      O2          O2          C           C           C           C           C           C
                  ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             5(0)        3(0)        3(0)        3(0)        2(0)        1(0)                    3(0)
           LOW             100.        48.7        40.         48.         67.5        28.0                   11.86
          HIGH             437.1       229.0       233.20      72.         109.0       28.0                   27.41
       AVERAGE             302.1       148.40      141.07      61.67       88.25                              20.76
      STD.DEV.             153.0        91.65       96.91      12.34       29.34                               8.01
  PERCNT:10TH
          25TH             184.3
   MEDIAN 50TH             352.0       167.5       150.        65.00       88.25                              23.
          75TH             437.0
          90TH
SECONDARY CODE          01L                                             07L 05L       52L

                         24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                        CHROMIUM    CHROMIUM    CHROMIUM     MERCURY     MERCURY     COBALT      COBALT      SILVER
                       HEXAVALENT    TOTAL       EXTRBLE.     TOTAL       TOTAL       TOTAL      EXTRBLE.    EXTRBLE.

                 SUBM      CR          CR          CR          HG          HG          CO          CO          AG
                  ID     MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             3(2)        3(0)        1(1)        3(2)                    3(2)        1(1)        1(1)
           LOW            L.001        .008        L.01       L.0001                  L.001       L.001        L.02
          HIGH              .02        .03         L.01        .0001                  L.01        L.001        L.02
       AVERAGE              .007*      .017                    .0001*                  .005*
      STD.DEV.              .011*      .011                    .0000*                  .005*
  PERCNT:10TH
          25TH
   MEDIAN 50TH            L.001        .014                   L.0001                   .005
          75TH
          90TH
SECONDARY CODE

                         29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                         COPPER      COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM      LEAD        LEAD
                          TOTAL     EXTRBLE.     TOTAL      EXTRBLE.      TOTAL     EXTRBLE.     TOTAL      EXTRBLE.

                 SUBM      CU          CU          NI          NI          CD          CD          PB          PB
                  ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             3(0)        1(0)        3(1)        1(0)        3(2)        1(1)        1(0)        3(3)
           LOW             .022        .085        L.02        .020        L.001       L.001        .004       L.002
          HIGH             .056        .085         .029       .020        L.01        L.001        .004       L.02
       AVERAGE             .040                     .023*                   .004*
      STD.DEV.             .017                     .005*                   .005*
  PERCNT:10TH
          25TH
   MEDIAN 50TH             .043                     .020                    .002                               L.003
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE 168                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                    INDUSTRIAL MONITORING
STATION 20AL05EB6801    LAT. 53D 44M 34S  LONG. 113D 11M  4S   PR 3   UTM 12 355950E 5956900N  FOR MAR 25, 1981 TO JUL 19, 1984
DOW CHEMICAL OF CANADA LTD FT SASK         FINAL EFFLUENT COMP.
S2/11 T55 R22 W4M

                        30009L        30305L        25003L        25304L        23009L        42304L        42009L        51003L
                         ZINC         ZINC         MANGANESE     MANGANESE    VANADIUM      MOLYBDENUM    MOLYBDENUM     ANTIMONY
                        TOTAL        EXTRBLE.       TOTAL         EXTRBLE.      TOTAL        EXTRBLE.       TOTAL         TOTAL

               SUBM     ZN             ZN            MN            MN             V             MO            MO            SB
                ID      MG/L          MG/L           MG/L          MG/L         MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)           3(0)          1(0)           3(0)          1(0)         3(0)                         2(1)          1(1)
           LOW            .148          .170           .137          .15           .004                       L.02         L.001
          HIGH            1.69          .170           .222          .15           .06                         .149        L.001
       AVERAGE            .689                         .179                        .024                       .084*
      STD.DEV.            .868                         .043                        .031                       .091*
   PERCNT:10TH
          25TH
   MEDIAN 50TH            .229                         .177                        .008                       .084*
          75TH
          90TH
SECONDARY CODE                                                                  02L

                        33005L        33104L        34005L        34102L        13111L        13306L        04102L        04304L
                        ARSENIC      ARSENIC       SELENIUM      SELENIUM      ALUMINUM       ALUMINUM    BERYLLIUM       BERYLLIUM
                      TOTAL         DISSOLVED     TOTAL          DISSOLVED     DISSOLVED     EXTRBLE.      DISSOLVED      EXTRBLE.

               SUBM      AS            AS            SE            SE            AL             AL            BE            BE
                ID      MG/L          MG/L           MG/L          MG/L         UG/L          MG/L           MG/L           MG/L
SAMPLES(FLAGS)           2(0)          1(0)          1(0)          1(1)          1(0)           1(0)          1(1)          2(2)
           LOW           .0125         .0048         .006         L.0002       1490.          2.40          L.005         L.001
          HIGH           .018          .0048         .006         L.0002       1490.          2.40          L.005         L.001
       AVERAGE           .0153
      STD.DEV.           .0039
   PERCNT:10TH
          25TH
   MEDIAN 50TH           .0153                                                                                            L.001
          75TH
          90TH
SECONDARY CODE                                      07L                                       02L                         02L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 169                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB6803    LAT. 53D 44M 34S  LONG. 113D 11M  4S   PR 3   UTM 12 355950E 5956900N  FOR JUL 06, 1983 TO JUL 19, 1984
DOW CHEMICAL OF CANADA LTD FT SASK        STORM WATER POND GRAB
S2/11 T55 R22 W4M

                           02061F        10301L        10301F        10151L        10101L        02041L        97160S        97163S
                         TEMPERATURE       PH            PH        ALKALINITY    ALKALINITY    SPECIFIC      DISCHARGE     DISCHARGE
                          OF WATER                                   PHENOL        TOTAL       CONDUCT.      INSTANT        DAILY
                                                                   PHTHALEIN                                                MEAN
                    SUBM                                             CACO3         CACO3
                     ID    DEG.C        PH UNITS      PH UNITS       MG/L          MG/L         US/CM          M3/S          CFS
SAMPLES(FLAGS)              1(0)         2(0)                         1(0)          2(0)         2(0)
           LOW              21.0          9.7                        250.0         239.         5909.
          HIGH              21.0         10.02                       250.0         663.0        7440.
       AVERAGE                                                                     451.0        6675.
      STD.DEV.                                                                     299.8        1083.
   PERCNT:10TH
          25TH
   MEDIAN 50TH                            9.86                                     451.0        6675.
          75TH
          90TH
SECONDARY CODE

                           06201L        06202L        06301L        20103L        20105L        10602L        10604L        97160S
                         BICARBONT.    BICARBONT.     CARBONATE      CALCIUM       CALCIUM      HARDNESS      HARDNESS      DISCHARGE
                          (CALCD.)      (CALCD.)      (CALCD.)      DISSOLVED     DISSOLVED      TOTAL         TOTAL         INSTANT
                                                                                  (CALCD.)      (CALCD.)
                    SUBM   HCO3          HCO3          CO3            CA            CA           CACO3         CACO3
                     ID   MG/L           MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)              1(0)         1(0)          1(0)          2(0)          1(0)          2(0)
           LOW              199.         127.          300.           8.4          34.8          34.1
          HIGH              199.         127.          300.          35.           34.8         120.3
       AVERAGE                                                       21.7                        77.2
      STD.DEV.                                                       18.8                        60.9
   PERCNT:10TH
          25TH
   MEDIAN 50TH                                                       21.7                        77.2
          75TH
          90TH
SECONDARY CODE                                                      10L

                           11103L        12102L        19103L        09107L        17203L        16306L        26009L        26304L
                           SODIUM       MAGNESIUM     POTASSIUM     FLUORIDE      CHLORIDE      SULPHATE        IRON          IRON
                          DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED       TOTAL        EXTRBLE.

                    SUBM    NA            MG            K             F             CL            SO4           FE            FE
                     ID    MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)              2(0)         2(0)          2(0)          2(0)          2(0)          2(0)                        1(0)
           LOW             1400.0         3.2          7.90           .26         1450.0          94.0                         .70
          HIGH             1610.          8.           13.0          2.00         2275.          194.                          .70
       AVERAGE             1505.0         5.6          10.45         1.130        1862.50        144.0
      STD.DEV.              148.5         3.4          3.61          1.230         583.36         70.7
   PERCNT:10TH
          25TH
   MEDIAN 50TH             1505.0         5.6          10.45         1.130        1862.50        144.0
          75TH
          90TH
SECONDARY CODE                                                      05L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 170                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                         INDUSTRIAL MONITORING
STATION 20AL05EB6803    LAT. 53D 44M 34S  LONG. 113D 11M  4S   PR 3   UTM 12 355950E 5956900N  FOR JUL 06, 1983 TO JUL 19, 1984
DOW CHEMICAL OF CANADA LTD FT SASK        STORM WATER POND GRAB
S2/11 T55 R22 W4M

                          07105L      07205L      07562L      07021L      07906L      07905L      15421L      97160S
                          NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN    PHOSPHORUS  DISCHARGE
                          DISSOLVED   DISSOLVED   DISSOLVED   TOTAL       PARTICULATE PARTICULATE TOTAL       INSTANT
                          NO3 & NO2   NITRITE     AMMONIA     KJELDAHL    TOTAL       (CALCD.)
                    SUBM  N           N           N           N           N           N           P
                    ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)            2(0)        2(1)        1(0)        2(0)        1(0)                    2(0)
           LOW            .09         L.05        .980        1.65        .14                     .275
          HIGH            .620        .130        .980        2.050       .14                     .280
       AVERAGE            .355        .090*                   1.850                               .278
      STD.DEV.            .375        .057*                   .283                                .004
  PERCNT:10TH
          25TH
   MEDIAN 50TH            .355        .090*                   1.850                               .278
          75TH
          90TH
SECONDARY CODE            10L         06L                     15L                                 06L

                          10474L      10407L      10511L      10453L      14101L      97160S      97163S
                          RESIDUE     RESIDUE     RESIDUE     RESIDUE     SILICA      DISCHARGE   DISCHARGE
                          TOTAL       NONFILTRABLE VOLATILE   FILTRABLE   REACTIVE    INSTANT     DAILY
                                                  NONFILTR.                                       MEAN
                    SUBM                          (CALCD.)                SIO2
                    ID    MG/L        MG/L        MG/L        MG/L        MG/L        M3/S        CFS
SAMPLES(FLAGS)            2(0)        2(0)                    2(0)        2(0)
           LOW            3600.0      11.0                    3600.0      3.7
          HIGH            4449.       49.                     4400.       8.50
       AVERAGE            4024.5      30.0                    4000.0      6.10
      STD.DEV.            600.3       26.9                    565.7       3.39
  PERCNT:10TH
          25TH
   MEDIAN 50TH            4024.5      30.0                    4000.0      6.10
          75TH
          90TH
SECONDARY CODE            71L         01L                     51L         02L

                          00205L      02074L      06537L      06524L      02001L      16101L      10701L      06608L
                          TOTAL       TURBIDITY   PHENOLIC    OIL AND     ODOUR       SULPHIDE    SURFACT.    CYANIDE
                          DISSOLVED               MATERIAL    GREASE      THRESHOLD   DISSOLVED   N-ALKYL
                          SOLIDS                                          NUMBER                  SULPHNTS.
                    SUBM                          PHENOL                              S           LAS         CN
                    ID    MG/L        NTU         MG/L        MG/L        TON         MG/L        MG/L        MG/L
SAMPLES(FLAGS)            1(0)        2(0)        2(0)        2(0)        1(0)        1(1)        1(0)
           LOW            4278.       20.0        .019        .6          8.          L.01        1.00
          HIGH            4278.       25.0        .040        1.4         8.          L.01        1.00
       AVERAGE                        22.5        .030        1.000
      STD.DEV.                        3.5         .015        .566
  PERCNT:10TH
          25TH
   MEDIAN 50TH                        22.5        .030        1.000
          75TH
          90TH
SECONDARY CODE                                                21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE 171                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB6803    LAT. 53D 44M 34S  LONG. 113D 11M  4S   PR 3   UTM 12 355950E 5956900N  FOR JUL 06, 1983 TO JUL 19, 1984
DOW CHEMICAL OF CANADA LTD FT SASK        STORM WATER POND GRAB
S2/11 T55 R22 W4M

                        08304L       08202L       06107L       06154L       06001L       06051L       06006L       06905L
                        OXYGEN       OXYGEN       CARBON       CARBON       CARBON       CARBON       CARBON       CARBON
                         TOTAL       BIOCHEM.    DISSOLVED    DISSOLVED      TOTAL        TOTAL       TOTAL     PARTICULATE
                           COD     DEMAND-BOD     ORGANIC     INORGANIC     ORGANIC    INORGANIC                  TOTAL
                  SUBM      02          O2           C            C            C            C            C           C
                   ID     MG/L        MG/L         MG/L         MG/L         MG/L         MG/L         MG/L        MG/L
SAMPLES(FLAGS)            2(0)        1(0)         1(0)         1(0)         1(0)                                  1(0)
           LOW            75.1       107.0         65.9         41.4         12.8                                  1.56
          HIGH            280.       107.0         65.9         41.4         12.8                                  1.56
       AVERAGE           177.5
      STD.DEV.           144.9
  PERCNT:10TH
          25TH
   MEDIAN 50TH           177.5
          75TH
          90TH
SECONDARY CODE            01L                                            05L

                        24101L       24009L       24302L       80015L       80011L       27009L       27302L       47304L
                       CHROMIUM     CHROMIUM     CHROMIUM     MERCURY      MERCURY      COBALT       COBALT       SILVER
                      HEXAVALENT     TOTAL       EXTRBLE.      TOTAL        TOTAL        TOTAL       EXTRBLE.     EXTRBLE.

                  SUBM    CR          CR           CR           HG           HG           CO           CO          AG
                   ID     MG/L        MG/L         MG/L         MG/L         UG/L         MG/L         MG/L        MG/L
SAMPLES(FLAGS)            1(0)        1(0)         1(0)         2(1)                      1(0)         1(1)
           LOW            .127        .015          .06       L.0001                      .003         L.001
          HIGH            .127        .015          .06        .0001                      .003         L.001
       AVERAGE                                                 .0001*
      STD.DEV.                                                 .0000*
  PERCNT:10TH
          25TH
   MEDIAN 50TH                                                 .0001*
          75TH
          90TH
SECONDARY CODE

                        29009L       29305L       28009L       28302L       48009L       48302L       82009L       82302L
                        COPPER       COPPER       NICKEL       NICKEL       CADMIUM      CADMIUM       LEAD         LEAD
                         TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.

                  SUBM    CU          CU           NI           NI           CD           CD           PB          PB
                   ID     MG/L        MG/L         MG/L         MG/L         MG/L         MG/L         MG/L        MG/L
SAMPLES(FLAGS)            1(0)        1(0)         1(0)         1(0)         1(1)         1(1)                     2(2)
           LOW            .009        .020         .006         .019        L.001        L.001                    L.002
          HIGH            .009        .020         .006         .019        L.001        L.001                    L.003
       AVERAGE
      STD.DEV.
  PERCNT:10TH
          25TH
   MEDIAN 50TH                                                                                                    L.002
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE 172                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 20AL05EB6803    LAT. 53D 44M 34S  LONG. 113D 11M  4S   PR 3   UTM 12 355950E 5956900N  FOR JUL 06, 1983 TO JUL 19, 1984
DOW CHEMICAL OF CANADA LTD FT SASK        STORM WATER POND GRAB
S2/11 T55 R22 W4M

                            30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                             ZINC        ZINC     MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                            TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                     SUBM    ZN          ZN          MN          MN          V           MO          MO          SB
                      ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)               1(0)        1(0)        1(0)        1(0)        2(0)                    1(0)
           LOW                .007        .005        .014        .05         .006                    .007
          HIGH                .007        .005        .014        .05         .011                    .007
       AVERAGE                                                                .009
      STD.DEV.                                                                .004
   PERCNT:10TH
          25TH
    MEDIAN 50TH                                                              .009
          75TH
          90TH
SECONDARY CODE                                                           02L

                            33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                            ARSENIC     ARSENIC    SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                            TOTAL      DISSOLVED    TOTAL      DISSOLVED   DISSOLVED   EXTRBLE.   DISSOLVED    EXTRBLE.

                     SUBM    AS          AS          SE          SE          AL          AL          BE          BE
                      ID    MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              1(0)        1(0)                    1(0)                    2(0)                    2(2)
           LOW              .0119       .0077                   .0002                    .12                    L.001
          HIGH              .0119       .0077                   .0002                    .301                   L.001
       AVERAGE                                                                           .211
      STD.DEV.                                                                           .128
   PERCNT:10TH
          25TH
    MEDIAN 50TH                                                                          .211                   L.001
          75TH
          90TH
SECONDARY CODE                                                                       02L                     02L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 173                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 20AL05EB7800    LAT. 53D 46M 30S  LONG. 113D  4M 45S   PR 3   UTM 12 363000E 5960250N  FOR MAR 11, 1980 TO APR 18, 1984
DIAMOND SHAMROCK ALTA GAS LTD FT SASK.    FINAL EFFLUENT GRAB
SE S29 T55 R21 W4M

                             02061F      10301L      10301F      10151L      10101L      02041L      97160S      97163S
                           TEMPERATURE     PH          PH      ALKALINITY  ALKALINITY   SPECIFIC   DISCHARGE   DISCHARGE
                           OF WATER                              PHENOL      TOTAL      CONDUCT.    INSTANT      DAILY
                                                               PHTHALEIN                                          MEAN
                    SUBM                                         CACO3       CACO3
                     ID     DEG.C      PH UNITS    PH UNITS      MG/L        MG/L       US/CM       M3/S         CFS
SAMPLES(FLAGS)              9(0)       14(0)       2(0)        12(2)       12(0)       12(0)                    10(0)
           LOW              16.0        6.48       8.9           .0         88.0        588.                     .13
          HIGH              40.0        9.09       8.9         29.2        327.0       2390.                     .46
       AVERAGE              25.8                                2.5*       202.5       1631.                     .2511
      STD.DEV.               7.7                                8.4*        70.9        579.                     .1044
   PERCNT:10TH                          6.68                     .0        117.         718.                     .1350
          25TH              21.5        7.40                     .0        145.5       1288.                     .15
   MEDIAN 50TH              24.0        7.85       8.90          .0        208.5       1730.                     .2550
          75TH              30.0        8.3                      .0*       254.5       2100.                     .294
          90TH                          9.0                     L.5        278.        2270.                     .4050
SECONDARY CODE

                             06201L      06202L      06301L      20103L      20105L      10602L      10604L      97160S
                           BICARBONT.  BICARBONT.  CARBONATE    CALCIUM     CALCIUM    HARDNESS    HARDNESS   DISCHARGE
                            (CALCD.)    (CALCD.)    (CALCD.)   DISSOLVED   DISSOLVED     TOTAL       TOTAL      INSTANT
                                                                            (CALCD.)    (CALCD.)
                    SUBM    HCO3        HCO3        CO3           CA          CA        CACO3       CACO3
                     ID     MG/L        MG/L        MG/L         MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)              12(2)       3(0)        12(2)        10(0)       3(0)        9(0)        3(0)
           LOW              Q106.       201.          0.          47.2        60.0       187.0       244.
          HIGH              399.        323.         35.          80.         78.2       290.3       297.0
       AVERAGE              241.*       256.          3.*         65.9        67.1       238.4       273.0
      STD.DEV.               82.*        62.         10.*         10.2         9.8        36.8        26.9
   PERCNT:10TH              143.                      0.          52.1
          25TH              177.                      0.          57.                    204.1
   MEDIAN 50TH              254.        244.          0.          68.5        63.0       257.9       278.
          75TH              283.                      0.          73.                    260.5
          90TH              323.                     Q1.          77.5
SECONDARY CODE                                             11L 10L

                             11103L      12102L      19103L      09107L      17203L      16306L      26009L      26304L
                             SODIUM     MAGNESIUM   POTASSIUM   FLUORIDE    CHLORIDE    SULPHATE      IRON        IRON
                           DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED     TOTAL      EXTRBLE.

                    SUBM      NA          MG          K            F           CL          SO4         FE          FE
                     ID     MG/L        MG/L        MG/L         MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              12(0)       12(0)       12(0)        12(0)       14(0)       12(0)       1(0)        10(0)
           LOW               30.0        14.         1.8          .12         40.         50.        2.83         .28
          HIGH              422.0        27.0        7.8          .24       1090.        208.0       2.83        4.80
       AVERAGE              242.8        19.6        4.44         .181       418.57      104.2                   1.801
      STD.DEV.              128.6         3.7        2.12         .034       286.13       48.4                   1.632
   PERCNT:10TH               37.         15.         2.00         .150        45.00       62.                     .340
          25TH              169.0        16.4        2.70         .160       260.00       73.5                    .75
   MEDIAN 50TH              240.5        19.5        3.82         .180       359.00       95.3                   1.050
          75TH              335.0        22.0        6.50         .200       514.0       105.0                   2.89
          90TH              408.0        23.0        7.3          .23        860.        193.                    4.550
SECONDARY CODE              11L          11L         11L       06L 05L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 174              NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                              INDUSTRIAL MONITORING
STATION 20AL05EB7800    LAT. 53D 46M 30S  LONG. 113D  4M 45S   PR 3   UTM 12 363000E 5960250N  FOR MAR 11, 1980 TO APR 18, 1984
DIAMOND SHAMROCK ALTA GAS LTD FT SASK.     FINAL EFFLUENT GRAB
SE S29 T55 R21 W4M

                          07105L        07205L        07562L        07021L        07906L        07905L        15421L        97160S
                          NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      PHOSPHORUS    DISCHARGE
                          DISSOLVED     DISSOLVED     DISSOLVED     TOTAL         PARTICULATE   PARTICULATE   TOTAL         INSTANT
                          NO3 & NO2     NITRITE       AMMONIA       KJELDAHL      TOTAL         (CALCD.)
                   SUBM   N             N             N             N             N             N             P
                   ID     MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)            11(9)         11(10)        11(1)         12(0)         8(0)                        14(0)
           LOW            L.003         L.003         L.020         .600          .23                         .388
          HIGH            .15           L.050         5.00          8.17          .78                         3.2
       AVERAGE            .053*         .044*         1.081*        2.123         .415                        1.101
      STD.DEV.            .036*         .015*         1.573*        2.157         .206                        .771
   PERCNT:10TH            .026          .026          .040          .8                                        .445
          25TH            L.05          L.05          .061          .938          .245                        .480
   MEDIAN 50TH            L.05          L.05          .250          1.065         .355                        .830
          75TH            L.05          L.05          1.760         2.785         .555                        1.530
          90TH            L.050         L.05          2.800         3.750                                     1.750
SECONDARY CODE            10L           06L           61L           15L                             19L 06L
                          10474L        10407L        10511L        10453L        14101L        97160S        97163S
                          RESIDUE       RESIDUE       RESIDUE       RESIDUE       SILICA        DISCHARGE     DISCHARGE
                          TOTAL         NONFILTRABLE  VOLATILE      FILTRABLE     REACTIVE      INSTANT       DAILY
                                                      NONFILTR.                                               MEAN
                   SUBM                               (CALCD.)                    SIO2
                   ID     MG/L          MG/L          MG/L          MG/L          MG/L          M3/S          CFS
SAMPLES(FLAGS)            12(0)         14(0)         1(0)          10(0)         12(0)                       10(0)
           LOW            564.          6.            29.0          550.          2.9                         .13
          HIGH            2172.         80.0          29.0          1375.         9.2                         .46
       AVERAGE            1198.0        37.4                        974.5         4.63                        .2511
      STD.DEV.            517.4         21.8                        270.9         1.60                        .1044
   PERCNT:10TH            777.          14.                         635.0         3.3                         .1350
          25TH            831.5         24.                         780.          3.80                        .15
   MEDIAN 50TH            1103.0        32.5                        950.0         4.45                        .2550
          75TH            1381.0        42.                         1170.         4.90                        .294
          90TH            2172.         77.0                        1347.5        5.3                         .4050
SECONDARY CODE            71L           01L                         51L           02L
                          00205L        02074L        06537L        06524L        02001L        16101L        10701L        06608L
                          TOTAL         TURBIDITY     PHENOLIC      OIL AND       ODOUR         SULPHIDE      SURFACT.      CYANIDE
                          DISSOLVED                   MATERIAL      GREASE        THRESHOLD     DISSOLVED     N-ALKYL
                          SOLIDS                                                  NUMBER                      SULPHNTS.
                   SUBM                               PHENOL                                    S             LAS           CN
                   ID     MG/L          NTU           MG/L          MG/L          TON           MG/L          MG/L          MG/L
SAMPLES(FLAGS)            10(0)                       12(1)         10(0)                                                   6(1)
           LOW            319.3                       L.002         1.2                                                     .007
          HIGH            1346.0                      .034          42.0                                                    L.02
       AVERAGE            857.5                       .011*         8.930                                                   .0113*
      STD.DEV.            331.7                       .009*         12.338                                                  .0057*
   PERCNT:10TH            355.2                       .004          1.350
          25TH            611.                        .006          1.9                                                     .007
   MEDIAN 50TH            922.0                       .010          5.650                                                   .0085
          75TH            1127.                       .014          7.3                                                     .0170
          90TH            1249.5                      .018          28.450
SECONDARY CODE                                                      21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE 175                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB7800    LAT. 53D 46M 30S  LONG. 113D  4M 45S   PR 3   UTM 12 363000E 5960250N  FOR MAR 1?, 1980 TO APR 18, 1984
DIAMOND SHAMROCK ALTA GAS LTD FT SASK.    FINAL EFFLUENT GRAB
SE S29 T55 R21 W4M

                         08304L      08202L      06107L      06154L      06001L      06051L      06006L      06905L
                         OXYGEN      OXYGEN      CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                          TOTAL     BIOCHEM.    DISSOLVED   DISSOLVED     TOTAL       TOTAL     TOTAL     PARTICULATE
                           COD     DEMAND-BOD    ORGANIC    INORGANIC    ORGANIC    INORGANIC               TOTAL
                 SUBM      02          02           C           C           C           C           C           C
                  ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           10(0)       10(0)        8(0)        8(0)        5(0)        1(0)        1(0)        8(0)
           LOW            48.0         7.0        4.          28.         12.0        67.         350.         2.40
          HIGH          1067.0       610.0        15.0        62.0        283.        67.         350.        16.88
       AVERAGE           208.0        90.62        9.14       47.85        82.30                               7.94
      STD.DEV.           306.6       184.32        3.96       12.70       113.04                               4.86
  PERCNT:10TH             58.8         9.00
          25TH            69.9        18.0         6.40       36.90        31.6                                4.79
   MEDIAN 50TH           105.6        23.75        8.00       52.50        33.9                                6.30
          75TH           203.0        66.0        12.65       57.00        51.0                               11.01
          90TH           636.0       349.60
SECONDARY CODE           01L                                          07L 05L

                         24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                        CHROMIUM    CHROMIUM    CHROMIUM    MERCURY     MERCURY     COBALT      COBALT      SILVER
                       HEXAVALENT    TOTAL      EXTRBLE.     TOTAL       TOTAL       TOTAL      EXTRBLE.    EXTRBLE.

                 SUBM      CR          CR          CR          HG          HG          CO          CO          AG
                  ID      MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)                         9(1)        1(1)       10(1)                    9(6)        2(1)        1(1)
           LOW                        L.001        L.01       L.0001                  L.001       L.001        L.02
          HIGH                         .040        L.01        .0012                  L.01         .005        L.02
       AVERAGE                         .015*                   .0005*                  .003*       .003*
      STD.DEV.                         .011*                   .0004*                  .003*       .003*
  PERCNT:10TH                                                  .0001*
          25TH                         .008                    .0002                  L.001
   MEDIAN 50TH                         .012                    .0003                  L.001        .003*
          75TH                         .02                     .0010                   .003
          90TH                                                 .0011
SECONDARY CODE

                         29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                         COPPER      COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM      LEAD        LEAD
                          TOTAL     EXTRBLE.      TOTAL     EXTRBLE.      TOTAL     EXTRBLE.     TOTAL      EXTRBLE.

                 SUBM      CU          CU          NI          NI          CD          CD          PB          PB
                  ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            9(0)        2(0)        9(1)        2(0)        9(6)        2(2)        5(3)        6(3)
           LOW            .009        .015        .005        .010       L.001       L.001       L.003       L.002
          HIGH            .077        .086        .039        .010       L.01        L.001        .005        .035
       AVERAGE            .028        .051        .018*       .010        .002*                   .004*       .014*
      STD.DEV.            .021        .050        .012*       .000        .003*                   .001*       .014*
  PERCNT:10TH
          25TH            .014                    .009                   L.001                   L.003        .002
   MEDIAN 50TH            .025        .051        .015        .010       L.001       L.001       L.003       L.011
          75TH            .033                    .024                    .002                    .004        .020
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 - 0012 PAGE 176

NAQUADAT SUMMARY REPORT JAN 08, 1986
INDUSTRIAL MONITORING

STATION 20AL05EB7800 LAT. 53D 46M 30S LONG. 113D 4M 45S PR 3 UTM 12 363000E 5960250N FOR MAR 11, 1980 TO APR 18, 1984
DIAMOND SHAMROCK ALTA GAS LTD FT SASK. FINAL EFFLUENT GRAB
SE S29 T55 R21 W4M

	30009L ZINC TOTAL	30305L ZINC EXTRBLE.	25003L MANGANESE TOTAL	25304L MANGANESE EXTRBLE.	23009L VANADIUM TOTAL	42304L MOLYBDENUM EXTRBLE.	42009L MOLYBDENUM TOTAL	51003L ANTIMONY TOTAL
SUBM ID	ZN MG/L	ZN MG/L	MN MG/L	MN MG/L	V MG/L	MO MG/L	MO MG/L	SB MG/L
SAMPLES(FLAGS)	12(0)	2(0)	9(0)	2(0)	10(2)		8(5)	1(0)
LOW	.054	.062	.054	.100	.001		L.001	.007
HIGH	1.91	1.730	.239	.10	L.01		L.02	.007
AVERAGE	.463	.896	.120	.100	.005*		.005*	
STD.DEV.	.601	1.179	.055	.000	.003*		.007*	
PERCNT:10TH	.064				.001*			
25TH	.078		.096		.002		L.001	
MEDIAN 50TH	.249	.896	.102	.100	.004		.002*	
75TH	.538		.142		.008		.008	
90TH	1.4				.009*			
SECONDARY CODE					02L			

	33005L ARSENIC TOTAL	33104L ARSENIC DISSOLVED	34005L SELENIUM TOTAL	34102L SELENIUM DISSOLVED	13111L ALUMINUM DISSOLVED	13306L ALUMINUM EXTRBLE.	04102L BERYLLIUM DISSOLVED	04304L BERYLLIUM EXTRBLE.
SUBM ID	AS MG/L	AS MG/L	SE MG/L	SE MG/L	AL UG/L	AL MG/L	BE MG/L	BE MG/L
SAMPLES(FLAGS)	5(0)	2(0)	5(4)	2(2)	1(0)	10(1)	1(1)	9(8)
LOW	.0009	.0071	L.0002	L.0002	430.	L.01	L.005	L.001
HIGH	.016	.0074	.006	L.0002	430.	.541	L.005	.001
AVERAGE	.0076	.0073	.0014*			.339*		.001*
STD.DEV.	.0061	.0002	.0026*			.171*		.000*
PERCNT:10TH						.096*		
25TH	.0038		L.0002			.205		L.001
MEDIAN 50TH	.0057	.0073	L.0002	L.0002		.345		L.001
75TH	.0118		L.0002			.472		L.001
90TH						.541		
SECONDARY CODE			07L			02L		02L

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0001 -  0003 PAGE 177                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                        INDUSTRIAL MONITORING
STATION 20AL05EB7801    LAT. 53D 46M 30S  LONG. 113D  4M 45S   PR 3   UTM 12 363000E 5960250N  FOR MAY 06, 1982 TO MAY 06, 1982
DIAMOND SHAMROCK ALTA GAS LTD FT SASK.     FINAL EFFLUENT COMP.
SE S29 T55 R21 W4M

                       02061F       10301L      10301F      10151L      10101L      02041L      97160S      97163S
                     TEMPERATURE      PH          PH       ALKALINITY  ALKALINITY   SPECIFIC   DISCHARGE   DISCHARGE
                      OF WATER                               PHENOL       TOTAL     CONDUCT.    INSTANT      DAILY
                                                           PHTHALEIN                                          MEAN
                SUBM                                         CACO3       CACO3
                 ID     DEG.C      PH UNITS    PH UNITS      MG/L        MG/L        US/CM        M3/S         CFS
SAMPLES(FLAGS)                       1(0)                    1(0)        1(0)        1(0)                     1(0)
           LOW                        7.3                      .0         96.        1392.                    .290
          HIGH                        7.3                      .0         96.        1392.                    .290
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                       06201L       06202L      06301L      20103L      20105L      10602L      10604L      97160S
                     BICARBONT.   BICARBONT.  CARBONATE    CALCIUM     CALCIUM     HARDNESS    HARDNESS    DISCHARGE
                       (CALCD.)     (CALCD.)   (CALCD.)   DISSOLVED   DISSOLVED      TOTAL       TOTAL      INSTANT
                                                                       (CALCD.)    (CALCD.)
                SUBM    HCO3         HCO3        CO3          CA          CA         CACO3       CACO3
                 ID    MG/L         MG/L        MG/L        MG/L        MG/L         MG/L        MG/L        M3/S
SAMPLES(FLAGS)           1(0)                    1(0)        1(0)
           LOW           117.                      0.         50.
          HIGH           117.                      0.         50.
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                               10L

                       11103L       12102L      19103L      09107L      17203L      16306L      26009L      26304L
                       SODIUM     MAGNESIUM   POTASSIUM    FLUORIDE    CHLORIDE    SULPHATE      IRON        IRON
                     DISSOLVED    DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED      TOTAL     EXTRBLE.

                SUBM    NA           MG           K           F           CL          SO4          FE          FE
                 ID    MG/L         MG/L        MG/L        MG/L        MG/L        MG/L         MG/L        MG/L
SAMPLES(FLAGS)          1(0)                    1(0)        1(0)        1(0)        1(0)                     1(0)
           LOW          193.                    11.0         .18        255.        140.                     1.82
          HIGH          193.                    11.0         .18        255.        140.                     1.82
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 178                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB7801    LAT. 53D 46M 30S  LONG. 113D  4M 45S   PR 3   UTM 12 363000E 5960250N  FOR MAY 06, 1982 TO MAY 06, 1982
DIAMOND SHAMROCK ALTA GAS LTD FT SASK.    FINAL EFFLUENT COMP.
SE S29 T55 R21 W4M

                       07105L        07205L        07562L        07021L        07906L        07905L       15421L        97160S
                      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN    PHOSPHORUS    DISCHARGE
                      DISSOLVED     DISSOLVED     DISSOLVED      TOTAL       PARTICULATE   PARTICULATE    TOTAL         INSTANT
                      NO3 & NO2      NITRITE      AMMONIA       KJELDAHL        TOTAL        (CALCD.)
               SUBM       N             N             N             N             N             N            P
               ID       MG/L          MG/L          MG/L          MG/L          MG/L          MG/L         MG/L          M3/S
SAMPLES(FLAGS)          1(0)          1(0)          1(0)          1(0)          1(0)                       1(0)
           LOW           .80           .25         1.700         3.800           .98                      2.350
          HIGH           .80           .25         1.700         3.800           .98                      2.350
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
    MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                       10474L        10407L        10511L        10453L        14101L        97160S       97163S
                      RESIDUE       RESIDUE       RESIDUE       RESIDUE        SILICA      DISCHARGE    DISCHARGE
                       TOTAL     NONFILTRABLE     VOLATILE     FILTRABLE      REACTIVE       INSTANT        DAILY
                                                NONFILTR.                                                  MEAN
               SUBM                             (CALCD.)                        SIO2
               ID      MG/L          MG/L          MG/L          MG/L          MG/L          M3/S          CFS
SAMPLES(FLAGS)          1(0)          1(0)                        1(0)          1(0)                       1(0)
           LOW          971.           81.                        890.           1.8                       .290
          HIGH          971.           81.                        890.           1.8                       .290
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
    MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE                                                               02L

                       00205L        02074L        06537L        06524L        02001L        16101L       10701L        06608L
                       TOTAL       TURBIDITY      PHENOLIC      OIL AND        ODOUR       SULPHIDE     SURFACT.       CYANIDE
                      DISSOLVED                   MATERIAL      GREASE       THRESHOLD     DISSOLVED    N-ALKYL
                       SOLIDS                                                  NUMBER                   SULPHNTS.
               SUBM                                PHENOL                                       S          LAS           CN
               ID       MG/L          NTU          MG/L          MG/L           TON           MG/L         MG/L         MG/L
SAMPLES(FLAGS)          1(0)                       1(0)          1(0)
           LOW          724.                        .007          1.1
          HIGH          724.                        .007          1.1
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
    MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
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REQUEST 0007 -  0009 PAGE 179                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                          INDUSTRIAL MONITORING
STATION 20AL05EB7801    LAT. 53D 46M 30S  LONG. 113D  4M 45S   PR 3   UTM 12 363000E 5960250N  FOR MAY 06, 1982 TO MAY 06, 1982
DIAMOND SHAMROCK ALTA GAS LTD FT SASK.    FINAL EFFLUENT COMP.
SE S29 T55 R21 W4M

                        08304L      08202L      06107L      06154L      06001L      06051L      06006L      06905L
                        OXYGEN      OXYGEN      CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                         TOTAL     BIOCHEM.    DISSOLVED   DISSOLVED    TOTAL       TOTAL      TOTAL      PARTICULATE
                          COD     DEMAND-BOD    ORGANIC    INORGANIC   ORGANIC    INORGANIC                 TOTAL
                  SUBM    02          02          C           C           C           C           C           C
                   ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            1(0)        1(0)        1(0)        1(0)                                            1(0)
           LOW             75.9        15.8        9.          30.                                             12.62
          HIGH             75.9        15.8        9.          30.                                             12.62
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                        24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                       CHROMIUM    CHROMIUM    CHROMIUM     MERCURY     MERCURY     COBALT      COBALT      SILVER
                      HEXAVALENT    TOTAL       EXTRBLE.    TOTAL       TOTAL       TOTAL       EXTRBLE.    EXTRBLE.

                  SUBM    CR          CR          CR          HG          HG          CO          CO          AG
                   ID    MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)                        1(0)                    1(1)                    1(1)
           LOW                         .015                   L.0001                  L.001
          HIGH                         .015                   L.0001                  L.001
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE

                        29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                        COPPER      COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM     LEAD        LEAD
                         TOTAL      EXTRBLE.    TOTAL       EXTRBLE.    TOTAL       EXTRBLE.    TOTAL       EXTRBLE.

                  SUBM    CU          CU          NI          NI          CD          CD          PB          PB
                   ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            1(0)                    1(0)                    1(1)                    1(0)
           LOW             .035                    .015                   L.001                    .016
          HIGH             .035                    .015                   L.001                    .016
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE 180                         NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                        INDUSTRIAL MONITORING
STATION 20AL05EB7801     LAT. 53D 46M 30S  LONG. 113D  4M 45S   PR 3   UTM 12 363000E 5960250N  FOR MAY 06, 1982 TO MAY 06, 1982
DIAMOND SHAMROCK ALTA GAS LTD FT SASK.     FINAL EFFLUENT COMP.
SE S29 T55 R21 W4M

                           30009L        30305L        25003L        25304L        23009L        42304L        42009L        51003L
                            ZINC          ZINC        MANGANESE     MANGANESE     VANADIUM     MOLYBDENUM    MOLYBDENUM    ANTIMONY
                           TOTAL        EXTRBLE.       TOTAL        EXTRBLE.       TOTAL        EXTRBLE.       TOTAL         TOTAL

                    SUBM    ZN            ZN            MN            MN            V             MO            MO            SB
                     ID    MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)             1(0)                        1(0)
           LOW             .533                        .077
          HIGH             .533                        .077
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 181                   NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                 INDUSTRIAL MONITORING
STATION 20AL05EB7803    LAT. 53D 46M 30S  LONG. 113D  4M 45S   PR 3   UTM 12 363000E 5960250N  FOR APR 20, 1983 TO AUG 04, 1983
DIAMOND SHAMROCK ALTA GAS LTD FT SASK.    STORM WATER POND - GRAB

                          02061F       10301L       10301F       10151L       10101L       02041L       97160S       97163S
                        TEMPERATURE      PH           PH       ALKALINITY   ALKALINITY    SPECIFIC    DISCHARGE    DISCHARGE
                        OF WATER                                 PHENOL        TOTAL      CONDUCT.     INSTANT       DAILY
                                                               PHTHALEIN                                              MEAN
                  SUBM                                           CACO3        CACO3
                   ID     DEG.C       PH UNITS     PH UNITS      MG/L         MG/L        US/CM         M3/S          CFS
SAMPLES(FLAGS)            2(0)         2(0)                      2(0)         2(0)        2(0)
           LOW            12.0          6.9                        .0         131.         387.
          HIGH            22.0          7.5                        .0         170.         529.
       AVERAGE            17.0                                     .0         150.5        458.
      STD.DEV.             7.1                                     .0          27.6        100.
  PERCNT:10TH
          25TH
   MEDIAN 50TH            17.0         7.20                        .0         150.5        458.
          75TH
          90TH
SECONDARY CODE

                          06201L       06202L       06301L       20103L       20105L       10602L       10604L       97160S
                        BICARBONT.   BICARBONT.   CARBONATE     CALCIUM      CALCIUM     HARDNESS     HARDNESS    DISCHARGE
                         (CALCD.)     (CALCD.)     (CALCD.)    DISSOLVED    DISSOLVED      TOTAL        TOTAL      INSTANT
                                                                            (CALCD.)     (CALCD.)
                  SUBM    HCO3         HCO3          CO3           CA          CA          CACO3        CACO3
                   ID    MG/L          MG/L         MG/L          MG/L        MG/L         MG/L         MG/L         M3/S
SAMPLES(FLAGS)            2(0)         1(0)         2(0)          2(0)                     2(0)
           LOW            160.         207.           0.          40.                      145.2
          HIGH            207.         207.           0.          50.                      182.5
       AVERAGE            183.                        0.          45.0                     163.8
      STD.DEV.             34.                        0.           7.1                      26.4
  PERCNT:10TH
          25TH
   MEDIAN 50TH            183.                        0.          45.0                     163.8
          75TH
          90TH
SECONDARY CODE                                                    10L

                          11103L       12102L       19103L       09107L       17203L       16306L       26009L       26304L
                          SODIUM      MAGNESIUM    POTASSIUM    FLUORIDE     CHLORIDE     SULPHATE       IRON         IRON
                        DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED    DISSOLVED      TOTAL       EXTRBLE.

                  SUBM     NA           MG            K            F            CL          S04           FE           FE
                   ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            2(0)         2(0)         2(0)         2(0)         2(0)         2(1)                      2(0)
           LOW            16.          11.          3.1          .14          22.          L5.                        .87
          HIGH            28.          14.          3.9          .16          36.          35.                       1.60
       AVERAGE            22.0         12.5         3.50         .150         29.00        20.0*                     1.235
      STD.DEV.             8.5          2.1          .57         .014          9.90        21.2*                      .516
  PERCNT:10TH
          25TH
   MEDIAN 50TH            22.0         12.5         3.50         .150         29.00        20.0*                     1.235
          75TH
          90TH
SECONDARY CODE
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REQUEST 0004 -  0006 PAGE 182                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB7803    LAT. 53D 46M 30S  LONG. 113D  4M 45S   PR 3   UTM 12 363000E 5960250N  FOR APR 20, 1983 TO AUG 04, 1983
DIAMOND SHAMROCK ALTA GAS LTD FT SASK.    STORM WATER POND - GRAB

                        07105L        07205L        07562L        07021L        07906L        07905L        15421L        97160S
                       NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN     PHOSPHORUS    DISCHARGE
                      DISSOLVED     DISSOLVED     DISSOLVED       TOTAL      PARTICULATE   PARTICULATE       TOTAL        INSTANT
                      NO3 & NO2      NITRITE       AMMONIA       KJELDAHL       TOTAL        (CALCD.)
               SUBM       N             N             N             N             N             N             P
                ID       MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)            2(2)          2(2)          2(0)          2(0)          2(0)                        2(0)
           LOW            L.05          L.05          .009          .710           .24                        .920
          HIGH            L.05          L.05          .140         1.740          1.00                       1.000
       AVERAGE                                        .075         1.225          .620                        .960
      STD.DEV.                                        .093          .728          .537                        .057
   PERCNT:10TH
          25TH
   MEDIAN 50TH           L.050         L.050          .075         1.225          .620                        .960
          75TH
          90TH
SECONDARY CODE

                        10474L        10407L        10511L        10453L        14101L        97160S        97163S
                       RESIDUE       RESIDUE       RESIDUE       RESIDUE        SILICA       DISCHARGE     DISCHARGE
                        TOTAL      NONFILTRABLE    VOLATILE      FILTRABLE     REACTIVE       INSTANT        DAILY
                                                  NONFILTR.                                                  MEAN
               SUBM                              (CALCD.)                      SIO2
                ID       MG/L          MG/L          MG/L          MG/L          MG/L          M3/S          CFS
SAMPLES(FLAGS)            2(0)          2(0)                        2(0)          2(0)
           LOW            260.           32.                        210.           1.8
          HIGH            452.           50.                        420.           4.0
       AVERAGE           356.0          41.0                       315.0          2.90
      STD.DEV.           135.8          12.7                       148.5          1.56
   PERCNT:10TH
          25TH
   MEDIAN 50TH           356.0          41.0                       315.0          2.90
          75TH
          90TH
SECONDARY CODE                                                                  02L

                        00205L        02074L        06537L        06524L        02001L        16101L        10701L        06608L
                        TOTAL       TURBIDITY      PHENOLIC       OIL AND        ODOUR        SULPHIDE      SURFACT.      CYANIDE
                      DISSOLVED                    MATERIAL       GREASE      THRESHOLD     DISSOLVED      N-ALKYL
                        SOLIDS                                                  NUMBER                    SULPHNTS.
               SUBM                             PHENOL                                      S            LAS            CN
                ID       MG/L          NTU           MG/L          MG/L          TON           MG/L          MG/L          MG/L
 AMPLES(FLAGS)            2(0)                        2(0)          2(0)                                                    1(0)
           LOW            206.                        .022           3.2                                                    .003
          HIGH            239.                        .023           4.4                                                    .003
       AVERAGE           222.5                        .023         3.800
      STD.DEV.            23.3                        .001          .849
   PERCNT:10TH
          25TH
   MEDIAN 50TH           222.5                        .023         3.800
          75TH
          90TH
 ECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE 183                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB7803    LAT. 53D 46M 30S  LONG. 113D  4M 45S   PR 3   UTM 12 363000E 5960250N  FOR APR 20, 1983 TO AUG 04, 1983
DIAMOND SHAMROCK ALTA GAS LTD FT SASK.    STORM WATER POND - GRAB

                         08304L       08202L       06107L       06154L       06001L       06051L       06006L       06905L
                         OXYGEN       OXYGEN       CARBON       CARBON       CARBON       CARBON       CARBON       CARBON
                           TOTAL     BIOCHEM.    DISSOLVED    DISSOLVED      TOTAL        TOTAL      TOTAL      PARTICULATE
                            COD    DEMAND-BOD     ORGANIC     INORGANIC     ORGANIC     INORGANIC                   TOTAL
                  SUBM      02           02          C            C            C            C            C           C
                   ID      MG/L         MG/L        MG/L         MG/L         MG/L         MG/L         MG/L        MG/L
SAMPLES(FLAGS)              2(0)         2(0)        2(0)         2(0)                                              2(0)
           LOW             181.6         62.0        69.0         29.0                                               2.50
          HIGH             297.6        138.0        89.0         32.0                                               5.67
       AVERAGE             239.6       100.00       79.00        30.50                                               4.08
      STD.DEV.              82.0        53.74       14.14         2.12                                               2.24
  PERCNT:10TH
          25TH
   MEDIAN 50TH             239.6       100.00       79.00        30.50                                               4.08
          75TH
          90TH
SECONDARY CODE

                         24101L       24009L       24302L       80015L       80011L       27009L       27302L       47304L
                        CHROMIUM     CHROMIUM     CHROMIUM     MERCURY      MERCURY      COBALT       COBALT       SILVER
                       HEXAVALENT     TOTAL       EXTRBLE.      TOTAL        TOTAL        TOTAL       EXTRBLE.     EXTRBLE.

                  SUBM     CR           CR           CR           HG           HG           CO           CO           AG
                   ID     MG/L         MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)                         2(0)                      2(2)                      2(1)
           LOW                         .008                     L.0001                     L.001
          HIGH                         .011                     L.0001                      .002
       AVERAGE                         .010                                                 .001*
      STD.DEV.                         .002                                                 .001*
  PERCNT:10TH
          25TH
   MEDIAN 50TH                         .010                     L.0001                      .001*
          75TH
          90TH
SECONDARY CODE

                         29009L       29305L       28009L       28302L       48009L       48302L       82009L       82302L
                         COPPER       COPPER       NICKEL       NICKEL       CADMIUM      CADMIUM       LEAD         LEAD
                          TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.      TOTAL       EXTRBLE.

                  SUBM     CU           CU           NI           NI           CD           CD           PB           PB
                   ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)            2(0)                      2(0)                      2(1)                      1(1)         1(0)
           LOW            .004                      .020                     L.001                     L.003         .014
          HIGH            .007                      .022                      .002                     L.003         .014
       AVERAGE            .006                      .021                      .001*
      STD.DEV.            .002                      .001                      .001*
  PERCNT:10TH
          25TH
   MEDIAN 50TH            .006                      .021                      .001*
          75TH
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE 184                   NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 20AL05EB7803    LAT. 53D 46M 30S  LONG. 113D  4M 45S   PR 3   UTM 12 363000E 5960250N  FOR APR 20, 1983 TO AUG 04, 1983
DIAMOND SHAMROCK ALTA GAS LTD FT SASK.    STORM WATER POND - GRAB

                          30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                           ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM  ANTIMONY
                          TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                  SUBM      ZN          ZN          MN          MN          V           MO          MO          SB
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             2(0)                    2(0)                    2(0)                    2(1)
           LOW             .077                    .074                    .003                    L.001
          HIGH             .153                    .258                    .006                    .004
       AVERAGE             .115                    .166                    .005                    .002*
      STD.DEV.             .054                    .130                    .002                    .002*
   PERCNT:10TH
          25TH
   MEDIAN 50TH             .115                    .166                    .005                    .002*
          75TH
          90TH
SECONDARY CODE

                          33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                          ARSENIC     ARSENIC    SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                          TOTAL      DISSOLVED   TOTAL       DISSOLVED   DISSOLVED   EXTRBLE.   DISSOLVED    EXTRBLE.

                  SUBM      AS          AS          SE          SE          AL          AL          BE          BE
                   ID      MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             1(0)                    1(1)                                2(1)                    2(2)
           LOW             .0018                   L.0002                              L.020                   L.001
          HIGH             .0018                   L.0002                              .090                    L.001
       AVERAGE                                                                         .055*
      STD.DEV.                                                                         .049*
   PERCNT:10TH
          25TH
   MEDIAN 50TH                                                                         .055*                   L.001
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 185              NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                             INDUSTRIAL MONITORING
STATION 20AL05EB9000    LAT. 53D 50M 40S  LONG. 113D  4M 45S   PR 3   UTM 12 363200E 5968000N  FOR MAR 31, 1980 TO JUL 25, 1984
ESSO CHEMICAL CANADA LTD REDWATER         FINAL EFFLUENT GRAB
S20 T56 R21 W4M

                      02061F        10301L        10301F       10151L        10101L        02041L        97160S        97163S
                    TEMPERATURE       PH            PH       ALKALINITY    ALKALINITY     SPECIFIC     DISCHARGE     DISCHARGE
                     OF WATER                                  PHENOL         TOTAL       CONDUCT.      INSTANT        DAILY
                                                             PHTHALEIN                                                  MEAN
               SUBM                                            CACO3         CACO3
                ID    DEG.C        PH UNITS      PH UNITS      MG/L          MG/L         US/CM
SAMPLES(FLAGS)        17(0)         19(0)         2(0)         19(2)         19(0)        19(0)          M3/S          CFS
          LOW          14.0          6.7          7.6            .0           32.2         314.                       19(0)
         HIGH          34.0          9.8          8.2          73.3          304.         3330.                        .22
      AVERAGE          22.6                                     5.6*         125.2        1412.                        3.8
     STD.DEV.           5.2                                    17.6*          90.4         856.                     1.5091
  PERCNT:10TH          14.5          7.2                         .0           35.          341.                     1.0337
         25TH          19.0          7.32                        .0           52.0         521.                        .45
  MEDIAN 50TH          23.0          7.8          7.90           .0           90.         1330.                        .69
         75TH          25.0          8.3                         .0          192.         2220.                       1.42
         90TH          30.0          8.5                       27.5          273.         2500.                       1.80
SECONDARY CODE                                                                                                        3.41

                      06201L        06202L        06301L       20103L        20105L        10602L        10604L        97160S
                    BICARBONT.    BICARBONT.    CARBONATE      CALCIUM       CALCIUM      HARDNESS      HARDNESS      DISCHARGE
                     (CALCD.)      (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED       TOTAL         TOTAL        INSTANT
                                                                             (CALCD.)      (CALCD.)
              SUBM   HCO3           HCO3          CO3            CA            CA          CACO3         CACO3
               ID   MG/L            MG/L          MG/L          MS/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)        19(2)          6(0)         19(2)         16(0)          4(0)         14(0)          5(0)          M3/S
          LOW         Q38.           56.            0.           27.1          42.6         119.1         138.0
         HIGH        Q318.          249.           88.          140.           94.6         473.1         211.
      AVERAGE        139.*          150.            7.*          71.8          59.0         269.7         181.4
     STD.DEV.         93.*           81.           21.*          27.2          24.0          83.1          31.8
  PERCNT:10TH         43.                           0.           33.0                       194.1
         25TH         63.            69.            0.           54.5          45.4         224.9         160.0
  MEDIAN 50TH        110.           149.            0.           74.5          49.4         264.7         189.
         75TH        229.           230.            0.           85.0          72.6         309.4         209.
         90TH        304.                          33.           95.0                       352.5
SECONDARY CODE                                             11L 10L

                      11103L        12102L        19103L       09107L        17203L        16306L        26009L        26304L
                      SODIUM      MAGNESIUM     POTASSIUM     FLUORIDE      CHLORIDE      SULPHATE        IRON          IRON
                    DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED       TOTAL        EXTRBLE.

              SUBM    NA             MG            K             F             CL           SO4            FE            FE
               ID    MG/L           MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)       19(0)          19(0)         19(0)         19(0)         19(0)         19(0)          2(0)         17(0)
          LOW         11.0          12.5           1.8           .18           3.8          93.5           .3            .10
         HIGH        350.           30.           44.0          3.30          25.00        1200.           .39          2.07
      AVERAGE        103.6          18.7          10.48          .944         13.89         419.6          .345          .488
     STD.DEV.         88.1           5.2           9.42          .901          6.97         270.1          .064          .493
  PERCNT:10TH         12.           13.0           2.6           .20           4.          107.0                        .10
         25TH         16.0          14.            3.0           .450          7.5          170.                         .20
  MEDIAN 50TH         98.           18.            8.7           .64          14.          410.           .345          .370
         75TH        136.0          22.           12.6          1.16          22.          560.0                         .50
         90TH        227.0          28.0          17.5          3.15          25.          660.0                         .99
SECONDARY CODE       11L            11L           11L           06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 186                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB9000    LAT. 53D 50M 40S  LONG. 113D  4M 45S   PR 3   UTM 12 363200E 5968000N  FOR MAR 31, 1980 TO JUL 25, 1984
ESSO CHEMICAL CANADA LTD REDWATER          FINAL EFFLUENT GRAB
S20 T56 R21 W4M

                          07105L      07205L      07562L      07021L      07906L       07905L       15421L      97160S
                         NITROGEN    NITROGEN    NITROGEN    NITROGEN    NITROGEN     NITROGEN    PHOSPHORUS   DISCHARGE
                         DISSOLVED   DISSOLVED   DISSOLVED    TOTAL     PARTICULATE  PARTICULATE    TOTAL       INSTANT
                         NO3 & NO2   NITRITE     AMMONIA     KJELDAHL     TOTAL       (CALCD.)
                  SUBM       N           N           N           N           N            N            P
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L         MG/L         MG/L        M3/S
SAMPLES(FLAGS)             19(0)       19(2)       19(0)       18(0)       13(0)                     19(0)
           LOW             1.00         L.05        .787        1.763        .09                       .375
          HIGH             98.91       22.50      152.00      258.33        2.15                      9.380
       AVERAGE             28.578       1.748*     45.792      63.143        .877                     2.248
      STD.DEV.             36.365       5.078*     50.126      76.738        .684                     2.216
   PERCNT:10TH             1.20         L.05        .788        1.875        .31                       .800
          25TH             1.65          .080      2.2          3.000        .35                       .87
    MEDIAN 50TH            3.80          .25      24.700       22.625        .52                      1.375
          75TH             55.00        1.170      82.03       95.000       1.31                      2.480
          90TH             93.48        2.26      128.20      170.83        2.06                      6.000
SECONDARY CODE                                     61L         15L                                19L 06L

                          10474L      10407L       10511L      10453L      14101L       97160S       97163S
                          RESIDUE     RESIDUE      RESIDUE     RESIDUE     SILICA      DISCHARGE    DISCHARGE
                           TOTAL    NONFILTRABLE   VOLATILE   FILTRABLE   REACTIVE      INSTANT       DAILY
                                                  NONFILTR.                                            MEAN
                  SUBM                            (CALCD.)                  SIO2
                   ID      MG/L        MG/L        MG/L        MG/L        MG/L         M3/S          CFS
SAMPLES(FLAGS)             17(0)       19(0)                   16(0)       19(0)                     19(0)
           LOW             218.0        5.                     190.         3.0                        .22
          HIGH             1392.       42.                     1350.        8.9                       3.8
       AVERAGE             883.9       20.8                     899.4       5.71                      1.5091
      STD.DEV.             379.0        9.5                     357.5       1.63                      1.0337
   PERCNT:10TH             290.0        8.                      370.        4.0                        .45
          25TH             529.        16.                      655.0       4.4                        .69
    MEDIAN 50TH            906.        19.2                     895.0       5.6                       1.42
          75TH             1255.       24.                     1260.0       6.7                       1.80
          90TH             1345.       37.0                    1310.        8.8                       3.41
SECONDARY CODE                         01L                     51L         02L

                          00205L      02074L       06537L      06524L      02001L       16101L       10701L       06608L
                           TOTAL     TURBIDITY    PHENOLIC    OIL AND      ODOUR       SULPHIDE     SURFACT.      CYANIDE
                         DISSOLVED                MATERIAL    GREASE     THRESHOLD    DISSOLVED     N-ALKYL
                          SOLIDS                                          NUMBER                    SULPHNTS.
                  SUBM                            PHENOL                                  S           LAS          CN
                   ID      MG/L        NTU         MG/L        MG/L         TON          MG/L         MG/L         MG/L
SAMPLES(FLAGS)             18(0)       16(0)       19(2)       19(3)                                 12(1)         6(2)
           LOW             160.0        1.2        L.002        L.200                                  .01        L.002
          HIGH             2272.       42.0         .560       13.0                                  17.31          .023
       AVERAGE             894.7       11.1         .036*       1.637*                                5.112*        .0097*
      STD.DEV.             527.4       11.7         .127*       2.827*                                6.971*        .0093*
   PERCNT:10TH             278.         1.7        L.002        L.200                                  .02
          25TH             305.         4.4         .004         .6                                    .320*        .003
    MEDIAN 50TH            949.5        6.4         .005       L0.                                     .855         .0050
          75TH             1119.       15.0         .010        1.2                                  12.165        L.02
          90TH             1572.       30.0         .020        3.0                                  15.71
SECONDARY CODE                         73L                     21L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE 187                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                      INDUSTRIAL MONITORING
STATION 20AL05EB9000    LAT. 53D 50M 40S  LONG. 113D  4M 45S   PR 3   UTM 12 363200E 5968000N  FOR MAR 31, 1980 TO JUL 25, 1984
ESSO CHEMICAL CANADA LTD REDWATER          FINAL EFFLUENT GRAB
S20 T56 R21 W4M

                         08304L      08202L      06107L      06154L      06001L      06051L      06006L      06905L
                         OXYGEN      OXYGEN      CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                          TOTAL     BIOCHEM.    DISSOLVED   DISSOLVED     TOTAL       TOTAL     TOTAL      PARTICULATE
                            COD    DEMAND-BOD    ORGANIC    INORGANIC    ORGANIC    INORGANIC                 TOTAL
                 SUBM      02          02          C           C           C           C           C           C
                  ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)            19(0)       3(0)       14(0)       13(0)        6(2)        4(0)        3(0)       13(0)
           LOW             15.6        4.4         4.4         6.6       L0.          4.0        43.           1.30
          HIGH             85.9       26.5        18.0        56.0       14.3        58.         59.          68.63
       AVERAGE             43.4       15.30        8.55       23.95       6.73*      39.50       53.33        10.42
      STD.DEV.             20.7       11.05        3.94       17.53       6.05*      24.62        8.96        17.78
   PERCNT:10TH             17.5                    4.8         8.00                                            1.90
          25TH             26.0                    6.2        11.0       L0.         23.00                     3.07
   MEDIAN 50TH             40.0       15.0         7.75       15.0        5.00       48.00       58.           5.61
          75TH             58.0                    9.         35.0       14.1        56.00                     8.63
          90TH             81.0                   16.0        51.                                             12.24
SECONDARY CODE            01L                    01L                    05L 07L     52L

                         24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                        CHROMIUM    CHROMIUM    CHROMIUM     MERCURY     MERCURY     COBALT      COBALT      SILVER
                       HEXAVALENT    TOTAL      EXTRBLE.      TOTAL       TOTAL       TOTAL     EXTRBLE.    EXTRBLE.

                 SUBM      CR          CR          CR          HG          HG          CO          CO          AG
                  ID      MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           16(11)      18(0)                   19(16)                  18(9)        1(1)        2(2)
           LOW           L.001        .005                   L.0001                   L.001       L.001       L.02
          HIGH            .820       2.150                    .0005                   L.01        L.001       L.02
       AVERAGE            .136*       .415                    .0002*                   .003*
      STD.DEV.            .276*       .780                    .0001*                   .003*
   PERCNT:10TH           L.001        .007                   L.0001                   L.001
          25TH           L.001        .008                   L.0001                   L.001
   MEDIAN 50TH           L.001        .031                   L.0001                    .003                   L.020
          75TH            .050        .100                   L.0001                    .004
          90TH            .700       2.000                    .0005                   L.01
SECONDARY CODE

                         29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                         COPPER      COPPER      NICKEL      NICKEL     CADMIUM     CADMIUM       LEAD        LEAD
                          TOTAL     EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.

                 SUBM      CU          CU          NI          NI          CD          CD          PB          PB
                  ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           18(0)        1(0)       18(2)        1(0)       18(12)       1(1)        7(3)       12(9)
           LOW             .002        .003        .004        .002      L.001       L.001       L.003       L.003
          HIGH             .022        .003       L.02         .002      L.01        L.001        .016       L.02
       AVERAGE             .009                    .011*                   .002*                   .006*       .006*
      STD.DEV.             .005                    .005*                   .003*                   .005*       .006*
   PERCNT:10TH             .002                    .004                  L.001                               L.003
          25TH             .006                    .007                  L.001                   L.003       L.003
   MEDIAN 50TH             .008                    .010                  L.001                    .004       L.003
          75TH             .010                    .013                    .002                    .009        .005
          90TH             .014                   L.02                   L.01                                L.02
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE 188                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB9000    LAT. 53D 50M 40S  LONG. 113D  4M 45S   PR 3   UTM 12 363200E 5968000N  FOR MAR 31, 1980 TO JUL 25, 1984
ESSO CHEMICAL CANADA LTD REDWATER         FINAL EFFLUENT GRAB
S20 T56 R21 W4M

                        30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                         ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                         TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

               SUBM       ZN          ZN          MN          MN          V           MO          MO          SB
                ID       MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           18(0)       1(0)        16(0)       1(0)        15(2)                   14(2)       2(2)
           LOW            .005        .010        .012        .007        .006                   L.001       L.001
          HIGH            .117        .010        .099        .007        .332                    .021       L.001
       AVERAGE            .040                    .054                    .037*                   .012*
      STD.DEV.            .031                    .025                    .083*                   .006*
   PERCNT:10TH            .007                    .023                    .006                    .007
          25TH            .017                    .033                    .008                    .008
   MEDIAN 50TH            .031                    .057                   L.01                     .011       L.0010
          75TH            .056                    .069                    .034                    .018
          90TH            .090                    .094                    .045                    .02
SECONDARY CODE                                                           02L

                        33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                        ARSENIC     ARSENIC     SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                         TOTAL     DISSOLVED     TOTAL     DISSOLVED   DISSOLVED    EXTRBLE.   DISSOLVED    EXTRBLE.

               SUBM       AS          AS          SE          SE          AL          AL          BE          BE
                ID       MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           9(2)        1(0)        8(7)        1(1)        2(0)        13(0)       2(2)        13(13)
           LOW           L.001       .0008       L.002       L.0002      860.         .50        L.005       L.001
          HIGH            .0026      .0008       L.0002      L.0002      570.         .880       L.005       L.001
       AVERAGE            .0029*                  .0005*                 715.00      1.353
      STD.DEV.            .0026*                  .0006*                 205.06      1.170
   PERCNT:10TH                                                                        .814                   L.001
          25TH            .0008                   .0007*                              .608                   L.001
   MEDIAN 50TH            .0065                  L.0002                  715.00       .940       L.005       L.001
          75TH            .0069                  L.0002                              1.990                   L.001
          90TH                                                                       1.800                   L.001
SECONDARY CODE                                   07L                                 02L                     02L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 189                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EB9001    LAT. 53D 50M 40S  LONG. 113D  4M 45S   PR 3   UTM 12 363200E 5968000N  FOR APR 01, 1980 TO JUL 24, 1984
ESSO CHEMICAL CANADA LTD REDWATER        FINAL EFFLUENT COMP.
S20 T56 R21 W4M

                          02061F        10301L        10301F       10151L        10101L        02041L        97160S        97163S
                        TEMPERATURE       PH            PH        ALKALINITY    ALKALINITY     SPECIFIC     DISCHARGE     DISCHARGE
                        OF WATER                                   PHENOL         TOTAL       CONDUCT.      INSTANT        DAILY
                                                                  PHTHALEIN                                                 MEAN
                  SUBM                                              CACO3         CACO3
                   ID     DEG.C       PH UNITS      PH UNITS        MG/L          MG/L         US/CM         M3/S          CFS
SAMPLES(FLAGS)             1(0)         6(0)          1(0)          5(0)          6(0)          6(0)                       6(0)
           LOW             24.0          8.2           7.6            .0          260.         2520.                        .33
          HIGH             24.0          7.10          7.6            .0           41.5        1297.                       3.0
       AVERAGE                                                       5.4          133.9        1520.                       1.2400
      STD.DEV.                                                      12.1          105.2         940.                        .9926
   PERCNT:10TH
          25TH                           8.2                          .0          256.         2260.                        .48
   MEDIAN 50TH                           9.30                         .0           46.5         431.                       1.0100
          75TH                           7.4                        27.           153.         2180.                       1.61
          90TH
SECONDARY CODE

                          06201L        06202L        06301L        20103L        20105L        10602L        10604L        97160S
                        BICARBONT.    BICARBONT.     CARBONATE      CALCIUM       CALCIUM      HARDNESS      HARDNESS     DISCHARGE
                          (CALCD.)      (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED       TOTAL         TOTAL        INSTANT
                                                                                  (CALCD.)      (CALCD.)
                  SUBM    HCO3          HCO3          CO3            CA            CA           CACO3         CACO3
                   ID    MG/L           MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)             5(0)         2(0)          5(0)          4(0)          2(0)          3(0)          3(0)
           LOW             317.         186.            0.          38.0          51.7         229.9          220.
          HIGH             187.          51.            0.          95.0          49.0         344.3          151.0
       AVERAGE             173.         118.            6.          70.8          50.3         283.5          193.3
      STD.DEV.             146.          96.           14.          24.3           1.9          57.5           37.1
   PERCNT:10TH
          25TH             312.                         0.          53.5
   MEDIAN 50TH              40.         118.            0.          75.0          50.3         276.4          209.
          75TH               7.                        32.          88.0
          90TH
SECONDARY CODE                                            11L 10L

                          11103L        12102L        19103L        09107L        17203L        16306L        26009L        26304L
                          SODIUM       MAGNESIUM     POTASSIUM     FLUORIDE      CHLORIDE      SULPHATE        IRON          IRON
                        DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED       TOTAL        EXTRBLE.
                  SUBM     NA            MG            K             F             CL           SO4            FE            FE
                   ID     MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)             6(0)         6(0)          6(0)          6(0)          6(0)          6(0)          1(0)          5(0)
           LOW             121.          22.           6.3           .49          22.          461.            .05          1.00
          HIGH             141.0         26.0         11.00          .620         24.00        570.0           .05           .370
       AVERAGE              91.3         19.2          9.55          .557         16.62        398.5                         .502
      STD.DEV.              60.9          4.8          5.16          .211          7.75        215.8                         .338
   PERCNT:10TH
          25TH             104.          21.          16.0           .50          23.          393.                           .11
   MEDIAN 50TH              15.5         14.0          4.75          .515          7.35        148.5                          .38
          75TH             151.          18.          14.5           .70          16.          670.                           .65
          90TH
SECONDARY CODE           11L          11L          11L          06L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 190                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                         INDUSTRIAL MONITORING
STATION 20AL05EB9001    LAT. 53D 50M 40S  LONG. 113D  4M 45S   PR 3   UTM 12 363200E 5968000N  FOR APR 01, 1980 TO JUL 24, 1984
ESSO CHEMICAL CANADA LTD REDWATER         FINAL EFFLUENT COMP.
S20 T56 R21 W4M

                      07105L       07205L       07562L       07021L       07906L       07905L       15421L       97160S
                      NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     PHOSPHORUS   DISCHARGE
                      DISSOLVED    DISSOLVED    DISSOLVED    TOTAL        PARTICULATE  PARTICULATE  TOTAL        INSTANT
                      NO3 & NO2    NITRITE      AMMONIA      KJELDAHL     TOTAL        (CALCD.)
                SUBM  N            N            N            N            N            N            P
                ID    MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         M3/S
  SAMPLES(FLAGS)      6(0)         6(0)         6(0)         6(0)         3(0)                      6(0)
             LOW      95.65        1.68         85.94        183.33       .64                       1.06
            HIGH      10.400       1.150        1.450        4.000        1.140                     1.280
         AVERAGE      39.390       3.112        44.924       74.034       .923                      1.277
        STD.DEV.      40.974       5.267        48.147       81.093       .257                      1.018
     PERCNT:10TH
            25TH      77.08        1.89         78.13        137.50                                 1.20
     MEDIAN 50TH      1.605        .101         1.511        2.188        .99                       1.937
            75TH      50.00        13.75        101.00       115.00                                 .245
            90TH
  SECONDARY CODE                                61L          15L                                    19L

                      10474L       10407L       10511L       10453L       14101L       97160S       97163S
                      RESIDUE      RESIDUE      RESIDUE      RESIDUE      SILICA       DISCHARGE    DISCHARGE
                      TOTAL        NONFILTRABLE VOLATILE     FILTRABLE    REACTIVE     INSTANT      DAILY
                                                NONFILTR.                                           MEAN
                SUBM                            (CALCD.)                  SIO2
                ID    MG/L         MG/L         MG/L         MG/L         MG/L         M3/S         CFS
  SAMPLES(FLAGS)      6(0)         6(0)                      5(0)         6(0)                      6(0)
             LOW      1389.        9.                        1380.        4.6                       .33
            HIGH      1074.3       24.4                      1050.0       7.00                      3.0
         AVERAGE      966.2        16.7                      1092.0       5.27                      1.2400
        STD.DEV.      476.3        10.7                      357.3        1.27                      .9926
     PERCNT:10TH
            25TH      1269.        9.                        1260.        4.6                       .48
     MEDIAN 50TH      375.0        11.5                      490.         4.60                      1.0100
            75TH      1315.        35.                       1280.        6.2                       1.61
            90TH
  SECONDARY CODE                   01L                                    02L

                      00205L       02074L       06537L       06524L       02001L       16101L       10701L       06608L
                      TOTAL        TURBIDITY    PHENOLIC     OIL AND      ODOUR        SULPHIDE     SURFACT.     CYANIDE
                      DISSOLVED                 MATERIAL     GREASE       THRESHOLD    DISSOLVED    N-ALKYL
                      SOLIDS                                              NUMBER                    SULPHNTS.
                SUBM                            PHENOL                                 S            LAS          CN
                ID    MG/L         NTU          MG/L         MG/L         TON          MG/L         MG/L         MG/L
  SAMPLES(FLAGS)      6(0)         6(0)         4(1)         4(0)                                   5(0)         1(1)
             LOW      1263.        3.7          L.002        11.0                                   16.03        L.002
            HIGH      937.8        5.5          .006         1.000                                  .66          L.002
         AVERAGE      874.0        9.7          .005*        3.325                                  6.120
        STD.DEV.      476.0        11.0         .002*        5.127                                  7.855
     PERCNT:10TH
            25TH      1101.        1.8          .004*        5.650                                  13.28
     MEDIAN 50TH      289.0        16.3         .005         .650                                   .04
            75TH      1364.0       15.0         .005         1.000                                  .59
            90TH
  SECONDARY CODE                   73L                       21L
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REQUEST 0007 -  0009 PAGE 191                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB9001    LAT. 53D 50M 40S  LONG. 113D  4M 45S   PR 3   UTM 12 363200E 5968000N  FOR APR 01, 1980 TO JUL 24, 1984
ESSO CHEMICAL CANADA LTD REDWATER         FINAL EFFLUENT COMP.
S20 T56 R21 W4M

                      08304L      08202L      06107L      06154L      06001L      06051L      06006L      06905L
                      OXYGEN      OXYGEN      CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                       TOTAL     BIOCHEM.    DISSOLVED   DISSOLVED     TOTAL       TOTAL     TOTAL       PARTICULATE
                        COD     DEMAND-BOD    ORGANIC    INORGANIC    ORGANIC    INORGANIC                 TOTAL
              SUBM      O2          O2          C           C           C           C           C           C
                ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)        6(0)                    3(0)        3(0)        3(0)        2(0)        2(0)        3(0)
           LOW        48.0                    8.          14.         6.          55.         61.         5.45
          HIGH        44.5                    9.00        10.80       19.7        57.         59.         7.10
       AVERAGE        43.3                    7.90        21.60        9.23       56.00       60.00       6.50
      STD.DEV.         9.5                    1.15        16.01        9.28        1.41        1.41        .91
   PERCNT:10TH
          25TH        39.0
   MEDIAN 50TH        45.5                    6.7         40.0        2.          56.00       60.00       6.96
          75TH        37.0
          90TH
SECONDARY CODE        01L                                             07L

                      24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                      CHROMIUM    CHROMIUM    CHROMIUM    MERCURY     MERCURY     COBALT      COBALT      SILVER
                      HEXAVALENT  TOTAL       EXTRBLE.    TOTAL       TOTAL       TOTAL       EXTRBLE.    EXTRBLE.

              SUBM      CR          CR          CR          HG          HG          CO          CO          AG
                ID    MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)        5(2)        4(0)                    4(3)                    4(2)                    1(1)
           LOW        .540        .04                     .0010                   L.01                    L.02
          HIGH        L.001       .015                    L.0001                   .004                   L.02
       AVERAGE        .231*       .034                    .0003*                   .004*
      STD.DEV.        .301*       .028                    .0004*                   .004*
   PERCNT:10TH
          25TH        .580        .056                    .0005*                   .006*
   MEDIAN 50TH        L.01        .041                    L.0001                   .002*
          75TH        .025        .013                    L.0001                   .002*
          90TH
SECONDARY CODE

                      29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                      COPPER      COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM     LEAD        LEAD
                      TOTAL       EXTRBLE.    TOTAL       EXTRBLE.    TOTAL       EXTRBLE.    TOTAL       EXTRBLE.

              SUBM      CU          CU          NI          NI          CD          CD          PB          PB
                ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)        4(0)                    4(1)                    4(2)                    1(1)        3(2)
           LOW        .014                    L.02                    L.01                    L.003       L.02
          HIGH        .015                    .017                    .002                    L.003       L.003
       AVERAGE        .021                    .015*                   .004*                               .010*
      STD.DEV.        .020                    .004*                   .004*                               .009*
   PERCNT:10TH
          25TH        .009                    .017*                   .006*
   MEDIAN 50TH        .027                    .012                    .001*                               .008
          75TH        .033                    .014                    .001*
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE 192                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 20AL05EB9001    LAT. 53D 50M 40S  LONG. 113D  4M 45S   PR 3   UTM 12 363200E 5968000N  FOR APR 29, 1981 TO JUL 24, 1984
ESSO CHEMICAL CANADA LTD REDWATER          FINAL EFFLUENT COMP.
S20 T56 R21 W4M
                           30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                            ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                           TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                   SUBM      ZN          ZN          MN          MN          V           MO          MO          SB
                    ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              4(0)                    3(0)                    4(1)                    4(1)        1(1)
           LOW               .1                      .064                   L.01                    L.02        L.001
          HIGH               .110                    .037                    .012                    .011       L.001
       AVERAGE               .114                    .057                    .019*                   .014*
      STD.DEV.               .031                    .017                    .016*                   .005*
  PERCNT:10TH
          25TH               .094                                            .009*                   .016*
   MEDIAN 50TH               .123                    .069                    .026                    .012
          75TH               .134                                            .028                    .011
          90TH
SECONDARY CODE
                           33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                           ARSENIC     ARSENIC     SELENIUM    SELENIUM    ALUMINUM    ALUMINUM    BERYLLIUM   BERYLLIUM
                           TOTAL      DISSOLVED    TOTAL      DISSOLVED   DISSOLVED    EXTRBLE.   DISSOLVED    EXTRBLE.

                   SUBM      AS          AS          SE          SE          AL          AL          BE          BE
                    ID      MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)              4(1)                    3(2)                    1(0)        3(0)        1(1)        3(3)
           LOW             L.001                   L.001                    600.        1.200       L.005       L.001
          HIGH              .0025                  L.0002                   600.         .716       L.005       L.001
       AVERAGE              .0025*                  .0005*                              1.279
      STD.DEV.              .0025*                  .0004*                               .606
  PERCNT:10TH
          25TH              .0007*
   MEDIAN 50TH              .0033                   .0004                               1.920                   L.001
          75TH              .0043
          90TH
SECONDARY CODE                                    07L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 193                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB9003    LAT. 53D 50M 40S  LONG. 113D  4M 45S   PR 3   UTM 12 363200E 5968000N  FOR MAR 31, 1980 TO APR 04, 1984
ESSO CHEMICAL CANADA LTD REDWATER         NORTH SURFACE RUNOFF DITCH GRAB
S20 T56 R21 W4M

                      02061F        10301L        10301F        10151L        10101L        02041L        97160S        97163S
                 TEMPERATURE            PH            PH    ALKALINITY    ALKALINITY      SPECIFIC     DISCHARGE     DISCHARGE
                    OF WATER                                    PHENOL         TOTAL      CONDUCT.       INSTANT         DAILY
                                                             PHTHALEIN                                                    MEAN
          SUBM                                                   CACO3         CACO3
            ID         DEG.C      PH UNITS      PH UNITS          MG/L          MG/L         US/CM          M3/S           CFS
SAMPLES(FLAGS)         10(0)         10(0)                       10(0)          7(0)         10(0)                        4(0)
           LOW           1.0           5.5                          .0           23.         3170.                         .13
          HIGH           8.0          7.40                          .0         565.6         4110.                         .13
       AVERAGE           7.6                                        .0         171.8         7816.                       .5100
      STD.DEV.           7.1                                        .0         221.0         7124.                       .7270
   PERCNT:10TH            .8          5.40                          .0                       4150.
          25TH            .5           6.0                          .0           45.         3810.                       .1550
   MEDIAN 50TH          16.0          2.70                          .0           11.        12715.                       .8900
          75TH           4.0           6.2                          .0          390.         4380.                       .8650
          90TH          12.0          7.45                          .0                       4215.
SECONDARY CODE

                      06201L        06202L        06301L        20103L        20105L        10602L        10604L        97160S
                  BICARBONT.    BICARBONT.     CARBONATE       CALCIUM       CALCIUM      HARDNESS      HARDNESS     DISCHARGE
                    (CALCD.)      (CALCD.)      (CALCD.)     DISSOLVED     DISSOLVED         TOTAL         TOTAL       INSTANT
                                                                            (CALCD.)      (CALCD.)
          SUBM          HCO3          HCO3           CO3            CA            CA         CACO3         CACO3
            ID          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)          7(0)          2(0)          7(0)          7(0)          4(0)          7(0)          3(0)
           LOW           28.          476.            0.           66.         130.7         473.6          673.
          HIGH          689.          689.            0.         230.0         227.7        1706.5          818.
       AVERAGE          209.          583.            0.         205.9         175.8        1199.8         772.7
      STD.DEV.          269.          151.            0.          98.0          40.2         612.0          86.4
   PERCNT:10TH
          25TH           55.                        0.          111.         148.3         524.2
   MEDIAN 50TH           13.          583.            0.          149.         172.3         664.4          827.
          75TH          475.                        0.          315.         203.3        1795.2
          90TH
SECONDARY CODE                                           10L

                      11103L        12102L        19103L        09107L        17203L        16306L        26009L        26304L
                      SODIUM     MAGNESIUM     POTASSIUM      FLUORIDE      CHLORIDE      SULPHATE          IRON          IRON
                   DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED     DISSOLVED         TOTAL      EXTRBLE.

          SUBM            NA            MG             K             F            CL           SO4            FE            FE
            ID          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          9(0)         10(0)         10(0)         10(0)         10(0)         10(0)                       10(0)
           LOW           68.           84.          32.3         19.85           37.          819.                       60.00
          HIGH         285.0         275.0         19.00         7.300         37.00        1880.0                       1.860
       AVERAGE         141.2         144.0         44.90        77.100         50.20        1599.1                      10.916
      STD.DEV.         102.0          84.8         49.93       100.928         45.28        1506.3                      17.793
   PERCNT:10TH                        92.0         32.30        47.425         33.50         905.0                      34.965
          25TH          209.           90.          25.8         33.85           26.          821.                        3.41
   MEDIAN 50TH            7.         145.0         22.25        79.500         32.00        1460.0                       4.130
          75TH          235.          210.          34.6         42.00           38.          700.                       14.84
          90TH                       260.0         23.25         8.650         48.00        1780.0                       1.010
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 194                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                      INDUSTRIAL MONITORING
STATION 20AL05EB9003    LAT. 53D 50M 40S  LONG. 113D  4M 45S   PR 3   UTM 12 363200E 5968000N  FOR MAR 31, 1980 TO APR 04, 1984
ESSO CHEMICAL CANADA LTD REDWATER          NORTH SURFACE RUNOFF DITCH GRAB
S20 T56 R21 W4M

                      07105L       07205L       07562L       07021L       07906L       07905L       15421L       97160S
                     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN     NITROGEN    PHOSPHORUS   DISCHARGE
                     DISSOLVED    DISSOLVED    DISSOLVED     TOTAL      PARTICULATE  PARTICULATE    TOTAL       INSTANT
                     NO3 & NO2    NITRITE      AMMONIA      KJELDAHL      TOTAL       (CALCD.)
                SUBM     N           N            N            N            N            N            P
                 ID     MG/L        MG/L         MG/L         MG/L         MG/L         MG/L         MG/L        M3/S
SAMPLES(FLAGS)         10(1)       10(1)        10(0)         7(0)         7(0)                     10(0)
           LOW         94.56         .38        97.66       191.67         5.26                    183.24
          HIGH         17.750       1.150       58.000       62.000         .660                    78.000
       AVERAGE         82.873*      .750*      494.803      213.310        2.013                   706.132
      STD.DEV.         69.525*      .797*     1036.44       137.412        1.707                  1448.43
  PERCNT:10TH         116.975       .440      171.815                                             336.410
          25TH         71.53        .57       125.00        429.17         2.10                    235.00
   MEDIAN 50TH         25.025*      .175*     222.950       355.00         1.40                    373.500
          75TH         25.20        .85       138.00         80.000         .27                    237.00
          90TH         42.000      2.000       62.750                                               54.750
SECONDARY CODE                                 61L          15L                                     19L

                      10474L       10407L       10511L       10453L       14101L       97160S       97163S
                     RESIDUE      RESIDUE      RESIDUE      RESIDUE       SILICA      DISCHARGE    DISCHARGE
                      TOTAL     NONFILTRABLE  VOLATILE    FILTRABLE     REACTIVE      INSTANT       DAILY
                                             NONFILTR.                                               MEAN
                SUBM                          (CALCD.)                    SIO2
                 ID    MG/L         MG/L         MG/L         MG/L         MG/L         M3/S          CFS
SAMPLES(FLAGS)         10(0)       10(0)                     10(0)        10(0)                      4(0)
           LOW         3245.        549.                     2900.         14.0                       .13
          HIGH         3795.6        75.6                    3720.0        32.50                      .13
       AVERAGE         6491.0       298.4                    6213.0        33.35                      .5100
      STD.DEV.         7982.3       331.7                    7896.2        21.35                      .7270
  PERCNT:10TH          4439.0       321.0                    4220.0        31.35
          25TH         3426.         36.                     3390.         23.5                       .1550
   MEDIAN 50TH         4343.5       198.5                    4145.0        32.20                      .8900
          75TH         4916.       1086.                     3830.         61.5                       .8650
          90TH         3836.3        71.3                    3765.0        35.25
SECONDARY CODE                                                             02L

                      00205L       02074L       06537L       06524L       02001L       16101L       10701L       06608L
                       TOTAL      TURBIDITY    PHENOLIC      OIL AND       ODOUR      SULPHIDE     SURFACT.     CYANIDE
                     DISSOLVED                 MATERIAL      GREASE      THRESHOLD    DISSOLVED    N-ALKYL
                      SOLIDS                                               NUMBER                  SULPHNTS.
                SUBM                            PHENOL                                    S           LAS          CN
                 ID    MG/L         NTU          MG/L         MG/L          TON          MG/L         MG/L        MG/L
SAMPLES(FLAGS)         10(0)        9(0)        10(0)        10(0)                                    6(0)
           LOW         1702.        283.0         .037         3.7                                   16.03
          HIGH         3143.1        25.0         .009          .860                                  1.49
       AVERAGE         3166.4       113.9         .034         4.806                                 15.155
      STD.DEV.         2743.0        82.8         .028         6.163                                  8.410
  PERCNT:10TH          2008.0                     .068         2.500
          25TH         1678.         42.0         .045         1.4                                   25.00
   MEDIAN 50TH         2009.5       125.0         .018         1.300                                 17.205
          75TH         3083.         90.0         .010        13.7                                   14.00
          90TH         3122.0                     .024          .930
SECONDARY CODE                       73L
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE 195                        NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                       INDUSTRIAL MONITORING
STATION 20AL05EB9003    LAT. 53D 50M 40S  LONG. 113D  4M 45S   PR 3   UTM 12 363200E 5968000N  FOR MAR 31, 1980 TO APR 04, 1984
ESSO CHEMICAL CANADA LTD REDWATER          NORTH SURFACE RUNOFF DITCH GRAB
S20 T56 R21 W4M

                            08304L       08202L       06107L       06154L       06001L       06051L       06006L       06905L
                            OXYGEN       OXYGEN       CARBON       CARBON       CARBON       CARBON       CARBON       CARBON
                             TOTAL       BIOCHEM.     DISSOLVED    DISSOLVED     TOTAL        TOTAL       TOTAL       PARTICULATE
                              COD        DEMAND-BOD   ORGANIC      INORGANIC    ORGANIC      INORGANIC                  TOTAL
                     SUBM     02            02          C            C            C            C            C            C
                      ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)               10(0)                      7(0)         7(0)         3(0)         3(0)         3(0)         7(0)
           LOW               134.0                     110.          32.          44.          14.          58.          35.08
          HIGH               175.0                      44.40       139.00        19.          19.          45.           3.52
       AVERAGE               148.5                      43.20        48.79        35.67        12.33        50.33        16.52
      STD.DEV.                67.9                      30.89        46.77        14.43         7.64         6.81        17.02
  PERCNT:10TH                141.0
          25TH               110.0                     17.          16.                                                  16.24
   MEDIAN 50TH                83.3                     28.0          7.5         44.           4.          48.           10.00
          75TH               167.0                     40.0         84.0                                                  3.12
          90TH               165.5
SECONDARY CODE

                            24101L       24009L       24302L       80015L       80011L       27009L       27302L       47304L
                           CHROMIUM     CHROMIUM     CHROMIUM     MERCURY      MERCURY      COBALT       COBALT       SILVER
                          HEXAVALENT     TOTAL        EXTRBLE.     TOTAL        TOTAL        TOTAL        EXTRBLE.     EXTRBLE.

                     SUBM     CR           CR           CR           HG           HG           CO           CO           AG
                      ID     MG/L         MG/L         MG/L         MG/L         UG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)                9(9)        10(0)                     10(10)                    10(0)
           LOW               L.001         .125                     L.0001                     .021
          HIGH               L.001         .025                     L.0001                     .015
       AVERAGE                             .234                                                .026
      STD.DEV.                             .425                                                .022
  PERCNT:10TH                              .100                     L.0001                     .019
          25TH               L.001         .048                     L.0001                     .012
   MEDIAN 50TH               L.001         .711                     L.0001                     .020
          75TH               L.001         .104                     L.0001                     .042
          90TH                             .023                     L.0001                     .012
SECONDARY CODE

                            29009L       29305L       28009L       28302L       48009L       48302L       82009L       82302L
                            COPPER       COPPER       NICKEL       NICKEL       CADMIUM      CADMIUM      LEAD         LEAD
                            TOTAL        EXTRBLE.     TOTAL        EXTRBLE.     TOTAL        EXTRBLE.     TOTAL        EXTRBLE.

                     SUBM     CU           CU           NI           NI           CD           CD           PB           PB
                      ID     MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L         MG/L
SAMPLES(FLAGS)               10(0)                     10(0)                     10(0)                     5(1)         5(4)
           LOW                .047                      .074                      .014                      .180         .004
          HIGH                .026                      .071                      .009                      .009        L.003
       AVERAGE                .040                      .096                      .018                      .041*        .003*
      STD.DEV.                .015                      .055                      .019                      .078*        .000*
  PERCNT:10TH                 .041                      .077                      .012
          25TH                .040                      .055                      .007                     L.003        L.003
   MEDIAN 50TH                .023                      .079                      .021                      .005        L.003
          75TH                .054                      .126                      .015                      .006        L.003
          90TH                .031                      .084                      .009
SECONDARY CODE
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REQUEST 0010 - 0012 PAGE 196

NAQUADAT SUMMARY REPORT JAN 08, 1986
INDUSTRIAL MONITORING

STATION 20AL05EB9003 LAT. 53D 50M 40S LONG. 113D 4M 45S PR 3 UTM 12 363200E 5968000N FOR MAR 31, 1980 TO APR 04, 1984
ESSO CHEMICAL CANADA LTD REDWATER NORTH SURFACE RUNOFF DITCH GRAB
S20 T56 R21 W4M

	30009L ZINC TOTAL	30305L ZINC EXTRBLE.	25003L MANGANESE TOTAL	25304L MANGANESE EXTRBLE.	23009L VANADIUM TOTAL	42304L MOLYBDENUM EXTRBLE.	42009L MOLYBDENUM TOTAL	51003L ANTIMONY TOTAL
SUBM ID	ZN MG/L	ZN MG/L	MN MG/L	MN MG/L	V MG/L	MO MG/L	MO MG/L	SB MG/L
SAMPLES(FLAGS)	10(0)		10(0)		6(0)		6(0)	
LOW	.231		1.740		.084		.025	
HIGH	.051		.861		.037		.017	
AVERAGE	.372		1.441		.102		.026	
STD.DEV.	.351		.997		.071		.013	
PERCNT:10TH	.212		1.455					
25TH	.139		.932		.204		.037	
MEDIAN 50TH	.602		.998		.131		.033	
75TH	.316		2.280		.026		.013	
90TH	.081		.647					
SECONDARY CODE								

	33005L ARSENIC TOTAL	33104L ARSENIC DISSOLVED	34005L SELENIUM TOTAL	34102L SELENIUM DISSOLVED	13111L ALUMINUM DISSOLVED	13306L ALUMINUM EXTRBLE.	04102L BERYLLIUM DISSOLVED	04304L BERYLLIUM EXTRBLE.
SUBM ID	AS MG/L	AS MG/L	SE MG/L	SE MG/L	AL UG/L	AL MG/L	BE MG/L	BE MG/L
SAMPLES(FLAGS)	3(0)		3(0)			6(0)		6(5)
LOW	.0340		.0010			9.300		L.001
HIGH	.0430		.0004			.990		L.001
AVERAGE	.0363		.0007			5.203		.002*
STD.DEV.	.0059		.0003			8.262		.002*
PERCNT:10TH								
25TH						20.400		.007
MEDIAN 50TH	.0320		.0007			.164		L.001
75TH						.200		L.001
90TH								
SECONDARY CODE								

* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q

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REQUEST 0001 -  0003 PAGE 197                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                  INDUSTRIAL MONITORING
STATION 20AL05EB9004    LAT. 53D 50M 40S  LONG. 113D  4M 45S   PR 3   UTM 12 363200E 5968000N  FOR AUG 02, 1984 TO AUG 02, 1984
ESSO CHEMICAL CANADA LTD REDWATER         NORTH SURFACE RUNOFF DITCH COMP.
S20 T56 R21 W4M

                         02061F         10301L        10301F        10151L        10101L        02041L        97160S         97163S
                      TEMPERATURE         PH            PH        ALKALINITY    ALKALINITY     SPECIFIC     DISCHARGE      DISCHARGE
                       OF WATER                                     PHENOL        TOTAL        CONDUCT.      INSTANT         DAILY
                                                                  PHTHALEIN                                                  MEAN
                  SUBM                                              CACO3         CACO3
                   ID    DEG.C        PH UNITS      PH UNITS        MG/L          MG/L          US/CM         M3/S           CFS
SAMPLES(FLAGS)                                                                                                              1(0)
           LOW                                                                                                             4.5
          HIGH                                                                                                             4.5
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
    MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0005 -  0007 PAGE 198                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                      INDUSTRIAL MONITORING
STATION 20AL05EB9004    LAT. 53D 50M 40S  LONG. 113D  4M 45S   PR 3   UTM 12 363200E 5968000N  FOR AUG 02, 1984 TO AUG 02, 1984
ESSO CHEMICAL CANADA LTD REDWATER          NORTH SURFACE RUNOFF DITCH COMP.
S20 T56 R21 W4M

                         10474L        10407L         10511L        10453L        14101L        97160S        97163S
                         RESIDUE       RESIDUE        RESIDUE       RESIDUE       SILICA       DISCHARGE     DISCHARGE
                          TOTAL      NONFILTRABLE    VOLATILE      FILTRABLE     REACTIVE      INSTANT        DAILY
                                                     NONFILTR.                                                MEAN
                  SUBM                               (CALCD.)                     SIO2
                   ID     MG/L          MG/L           MG/L          MG/L         MG/L          M3/S           CFS
SAMPLES(FLAGS)                                                                                                1(0)
           LOW                                                                                               4.5
          HIGH                                                                                               4.5
       AVERAGE
      STD.DEV.
   PERCNT:10TH
          25TH
   MEDIAN 50TH
          75TH
          90TH
SECONDARY CODE
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NAQUADAT SUMMARY REPORT JAN 08, 1986
INDUSTRIAL MONITORING

STATION 20AL05EB9005 LAT. 53D 50M 40S LONG. 113D 4M 45S PR 3 UTM 12 363200E 5968000N FOR MAR 31, 1980 TO APR 04, 1984
ESSO CHEMICAL CANADA LTD REDWATER SOUTH SURFACE RUNOFF DITCH GRAB
S20 T56 R21 W4M

	02061F TEMPERATURE OF WATER	10301L PH	10301F PH	10151L ALKALINITY PHENOL PHTHALEIN	10101L ALKALINITY TOTAL	02041L SPECIFIC CONDUCT.	97160S DISCHARGE INSTANT	97163S DISCHARGE DAILY MEAN
SUBM ID	DEG.C	PH UNITS	PH UNITS	CACO3 MG/L	CACO3 MG/L	US/CM	M3/S	CFS
SAMPLES(FLAGS)	7(0)	7(0)		7(0)	7(0)	7(0)		3(0)
LOW	.0	7.3		.0	90.	956.		.09
HIGH	8.0	7.70		.0	319.2	3560.		.06
AVERAGE	2.4			.0	208.9	1927.		.0600
STD.DEV.	2.7			.0	202.3	1185.		.0300
PERCNT:10TH								
25TH	.5	7.4		.0	115.	1146.		
MEDIAN 50TH	3.0	8.0		.0	628.	3700.		.03
75TH	3.0	7.7		.0	129.	1694.		
90TH								
SECONDARY CODE								

	06201L BICARBONT. (CALCD.)	06202L BICARBONT. (CALCD.)	06301L CARBONATE (CALCD.)	20103L CALCIUM DISSOLVED	20105L CALCIUM DISSOLVED (CALCD.)	10602L HARDNESS TOTAL (CALCD.)	10604L HARDNESS TOTAL	97160S DISCHARGE INSTANT
SUBM ID	HCO3 MG/L	HCO3 MG/L	CO3 MG/L	CA MG/L	CA MG/L	CACO3 MG/L	CACO3 MG/L	M3/S
SAMPLES(FLAGS)	7(0)	1(0)	7(0)	4(0)	4(0)	4(0)	3(0)	
LOW	110.	389.	0.	305.	49.0	1708.5	205.	
HIGH	389.	389.	0.	186.0	184.9	958.5	285.	
AVERAGE	255.		0.	167.5	89.9	855.7	258.3	
STD.DEV.	247.		0.	103.4	63.7	635.6	46.2	
PERCNT:10TH								
25TH	140.		0.	188.0	56.0	996.4		
MEDIAN 50TH	766.		0.	89.5	62.9	377.9	285.	
75TH	157.		0.	147.0	123.9	714.9		
90TH								
SECONDARY CODE				10L				

	11103L SODIUM DISSOLVED	12102L MAGNESIUM DISSOLVED	19103L POTASSIUM DISSOLVED	09107L FLUORIDE DISSOLVED	17203L CHLORIDE DISSOLVED	16306L SULPHATE DISSOLVED	26009L IRON TOTAL	26304L IRON EXTRBLE.
SUBM ID	NA MG/L	MG MG/L	K MG/L	F MG/L	CL MG/L	S04 MG/L	FE MG/L	FE MG/L
SAMPLES(FLAGS)	7(0)	7(0)	7(0)	7(0)	7(0)	7(0)		7(0)
LOW	38.	20.	22.5	3.00	52.	144.		2.95
HIGH	169.0	120.0	48.00	5.000	97.00	1020.0		.140
AVERAGE	100.4	72.4	22.56	3.673	60.86	542.7		1.493
STD.DEV.	94.9	77.4	12.05	1.087	20.57	594.2		1.001
PERCNT:10TH								
25TH	49.	31.	19.2	3.82	52.	223.		2.15
MEDIAN 50TH	289.	230.	10.6	2.06	49.	1700.		.44
75TH	65.	49.	24.1	4.80	69.	320.		1.73
90TH								
SECONDARY CODE								

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REQUEST 0004 -  0006 PAGE 200                      NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB9005    LAT. 53D 50M 40S  LONG. 113D  4M 45S   PR 3   UTM 12 363200E 5968000N  FOR MAR 31, 1980 TO APR 04, 1984
ESSO CHEMICAL CANADA LTD REDWATER         SOUTH SURFACE RUNOFF DITCH GRAB
S20 T56 R21 W4M

                      07105L          07205L          07562L          07021L          07906L          07905L          15421L          97160S
                      NITROGEN        NITROGEN        NITROGEN        NITROGEN        NITROGEN        NITROGEN        PHOSPHORUS      DISCHARGE
                      DISSOLVED       DISSOLVED       DISSOLVED       TOTAL           PARTICULATE     PARTICULATE     TOTAL           INSTANT
                      NO3 & NO2       NITRITE         AMMONIA         KJELDAHL        TOTAL           (CALCD.)
                SUBM  N               N               N               N               N               N               P
                 ID   MG/L            MG/L            MG/L            MG/L            MG/L            MG/L            MG/L            M3/S
SAMPLES(FLAGS)        7(0)            7(0)            7(0)            7(0)            4(0)                            7(0)
           LOW        27.88           .65             39.06           54.69           .36                             30.36
          HIGH        100.00          4.250           144.00          260.00          .360                            34.000
       AVERAGE        41.619          1.233           53.800          76.626          .675                            23.936
      STD.DEV.        28.217          1.355           41.869          82.050          .375                            8.919
   PERCNT:10TH
          25TH        24.85           .65             46.88           56.67           .620                            25.00
   MEDIAN 50TH        17.00           .55             12.000          18.500          .990                            24.250
          75TH        44.60           1.30            53.500          54.000          .730                            22.000
          90TH
SECONDARY CODE                                        61L             15L                                             19L

                      10474L          10407L          10511L          10453L          14101L          97160S          97163S
                      RESIDUE         RESIDUE         RESIDUE         RESIDUE         SILICA          DISCHARGE       DISCHARGE
                      TOTAL           NONFILTRABLE    VOLATILE        FILTRABLE       REACTIVE        INSTANT         DAILY
                                                      NONFILTR.                                                       MEAN
                SUBM                                  (CALCD.)                        SIO2
                 ID   MG/L            MG/L            MG/L            MG/L            MG/L            M3/S            CFS
SAMPLES(FLAGS)        7(0)            7(0)                            7(0)            7(0)                            3(0)
           LOW        992.            282.                            710.            5.4                             .09
          HIGH        2660.0          70.0                            2590.0          19.50                           .06
       AVERAGE        1737.1          172.0                           1565.1          10.89                           .0600
      STD.DEV.        1105.8          95.1                            1146.1          7.65                            .0300
   PERCNT:10TH
          25TH        1181.           301.                            880.            6.2
   MEDIAN 50TH        3857.           131.                            3726.           23.9                            .03
          75TH        1423.           223.                            1200.           9.9
          90TH
SECONDARY CODE                                                                        02L

                      00205L          02074L          06537L          06524L          02001L          16101L          10701L          06608L
                      TOTAL           TURBIDITY       PHENOLIC        OIL AND         ODOUR           SULPHIDE        SURFACT.        CYANIDE
                      DISSOLVED                       MATERIAL        GREASE          THRESHOLD       DISSOLVED       N-ALKYL
                      SOLIDS                                                          NUMBER                          SULPHNTS.
                SUBM                                  PHENOL                                          S               LAS             CN
                 ID   MG/L            NTU             MG/L            MG/L            TON             MG/L            MG/L            MG/L
SAMPLES(FLAGS)        7(0)            6(0)            7(0)            7(0)                                            3(0)
           LOW        542.            91.5            .020            .7                                              4.88
          HIGH        2273.6          70.0            .010            .420                                            8.59
       AVERAGE        1263.5          70.9            .018            1.374                                           6.117
      STD.DEV.        984.6           20.6            .006            1.745                                           2.142
   PERCNT:10TH
          25TH        662.            55.0            .024            .6
   MEDIAN 50TH        3035.           74.5            .014            5.3                                             4.88
          75TH        986.            60.0            .009            1.1
          90TH
SECONDARY CODE                        73L
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REQUEST 0007 -  0009 PAGE 201                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB9005    LAT. 53D 50M 40S  LONG. 113D  4M 45S   PR 3   UTM 12 363200E 5968000N  FOR MAR 31, 1980 TO APR 04, 1984
ESSO CHEMICAL CANADA LTD REDWATER         SOUTH SURFACE RUNOFF DITCH GRAB
S20 T56 R21 W4M

                     08304L        08202L        06107L        06154L        06001L        06051L        06006L        06905L
                     OXYGEN        OXYGEN        CARBON        CARBON        CARBON        CARBON        CARBON        CARBON
                      TOTAL        BIOCHEM.      DISSOLVED     DISSOLVED      TOTAL         TOTAL        TOTAL         PARTICULATE
                       COD         DEMAND-BOD    ORGANIC       INORGANIC     ORGANIC       INORGANIC                    TOTAL
              SUBM     02             02         C             C             C             C             C             C
               ID    MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)        7(0)                       4(0)          4(0)          3(0)          3(0)          3(0)          4(0)
           LOW        94.0                       37.           174.          24.           22.           46.           5.26
          HIGH        96.0                       72.90          62.20        11.           23.           44.           2.48
       AVERAGE        86.6                       35.72          70.30        21.00         23.67         48.00         5.86
      STD.DEV.         9.5                       26.63          71.65         8.89          2.08          5.29         3.11
   PERCNT:10TH
          25TH        93.0                       26.00          97.00                                                  5.48
   MEDIAN 50TH        92.9                       16.50          22.50        28.           26.           54.           7.85
          75TH        73.9                       45.45          43.60                                                  6.24
          90TH
SECONDARY CODE

                     24101L        24009L        24302L        80015L        80011L        27009L        27302L        47304L
                    CHROMIUM      CHROMIUM      CHROMIUM       MERCURY       MERCURY       COBALT        COBALT        SILVER
                   HEXAVALENT      TOTAL         EXTRBLE.      TOTAL         TOTAL         TOTAL         EXTRBLE.      EXTRBLE.

              SUBM   CR            CR            CR            HG            HG            CO            CO            AG
               ID    MG/L          MG/L          MG/L          MG/L          UG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)        7(6)          7(0)                        7(7)                        7(0)
           LOW       L.001          .026                       L.0001                       .006
          HIGH       L.001          .015                       L.0001                       .007
       AVERAGE        .001*         .017                                                    .007
      STD.DEV.        .001*         .006                                                    .002
   PERCNT:10TH
          25TH        .003          .010                       L.0001                       .006
   MEDIAN 50TH       L.001          .020                       L.0001                       .010
          75TH       L.001          .021                       L.0001                       .007
          90TH
SECONDARY CODE

                     29009L        29305L        28009L        28302L        48009L        48302L        82009L        82302L
                     COPPER        COPPER        NICKEL        NICKEL        CADMIUM       CADMIUM       LEAD          LEAD
                      TOTAL        EXTRBLE.      TOTAL         EXTRBLE.      TOTAL         EXTRBLE.      TOTAL         EXTRBLE.

              SUBM   CU            CU            NI            NI            CD            CD            PB            PB
               ID    MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)        7(0)                       7(0)                        7(0)                        3(0)          4(1)
           LOW        .015                       .028                        .002                        .009          .008
          HIGH        .009                       .033                        .006                        .011         L.003
       AVERAGE        .021                       .029                        .004                        .009          .009*
      STD.DEV.        .025                       .006                        .002                        .002          .004*
   PERCNT:10TH
          25TH        .010                       .027                        .003                                      .011
   MEDIAN 50TH        .006                       .039                        .006                        .008          .012
          75TH        .020                       .033                        .004                                      .006*
          90TH
SECONDARY CODE
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REQUEST 0010 -  0012 PAGE 202                     NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EB9005    LAT. 53D 50M 40S  LONG. 113D  4M 45S   PR 3   UTM 12 363200E 5968000N  FOR MAR 31, 1980 TO APR 04, 1984
ESSO CHEMICAL CANADA LTD REDWATER         SOUTH SURFACE RUNOFF DITCH GRAB
S20 T56 R21 W4M

                       30009L        30305L        25003L        25304L        23009L        42304L        42009L        51003L
                        ZINC          ZINC        MANGANESE     MANGANESE     VANADIUM     MOLYBDENUM    MOLYBDENUM     ANTIMONY
                        TOTAL        EXTRBLE.      TOTAL         EXTRBLE.      TOTAL        EXTRBLE.       TOTAL         TOTAL

               SUBM     ZN            ZN            MN            MN            V             MO            MO            SB
                ID     MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          7(0)                        7(0)                        3(0)                        3(0)
           LOW          .065                        .241                        .013                        .007
          HIGH          .033                        .223                        .026                        .012
       AVERAGE          .091                        .278                        .022                        .009
      STD.DEV.          .073                        .072                        .008                        .003
  PERCNT:10TH
          25TH          .041                        .256
   MEDIAN 50TH          .021                        .396                        .027                        .008
          75TH          .097                        .323
          90TH
SECONDARY CODE

                       33005L        33104L        34005L        34102L        13111L        13306L        04102L        04304L
                       ARSENIC       ARSENIC       SELENIUM      SELENIUM      ALUMINUM      ALUMINUM      BERYLLIUM     BERYLLIUM
                       TOTAL        DISSOLVED     TOTAL         DISSOLVED     DISSOLVED     EXTRBLE.      DISSOLVED      EXTRBLE.

               SUBM     AS            AS            SE            SE            AL            AL            BE            BE
                ID     MG/L          MG/L          MG/L          MG/L          UG/L          MG/L          MG/L          MG/L
SAMPLES(FLAGS)          1(0)                        1(1)                                      3(0)                        3(3)
           LOW          .0250                       L.0002                                     .043                       L.001
          HIGH          .0250                       L.0002                                     .171                       L.001
       AVERAGE                                                                                 .454
      STD.DEV.                                                                                 .604
  PERCNT:10TH
          25TH
   MEDIAN 50TH                                                                                1.147                       L.001
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0001 -  0003 PAGE 203                          NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                        INDUSTRIAL MONITORING
STATION 20AL05EC1000     LAT. 53D 53M 45S  LONG. 112D 55M  0S   PR 3   UTM 12 374050E 5973400N  FOR JUL 15, 1983 TO JUN 05, 1984
SIL SILICA LTD. BRUDERHEIM                        SETTLING POND EFFLUENT GRAB
SW S9 T57 R20 W4M

                          02061F      10301L      10301F      10151L      10101L      02041L      97160S      97163S
                        TEMPERATURE     PH          PH      ALKALINITY  ALKALINITY   SPECIFIC   DISCHARGE   DISCHARGE
                        OF WATER                              PHENOL      TOTAL      CONDUCT.    INSTANT      DAILY
                                                            PHTHALEIN                                          MEAN
                 SUBM                                         CACO3       CACO3
                  ID      DEG.C      PH UNITS    PH UNITS     MG/L        MG/L        US/CM       M3/S         CFS
SAMPLES(FLAGS)             2(0)        2(0)                   1(0)        2(0)        2(0)
           LOW             17.0        8.10                     .0        113.6       306.
          HIGH             16.0        8.30                     .0        144.5       389.
       AVERAGE             16.5                                           129.0       348.
      STD.DEV.               .7                                            21.8        59.
   PERCNT:10TH
          25TH
   MEDIAN 50TH             16.5        8.20                               129.0       348.
          75TH
          90TH
SECONDARY CODE

                          06201L      06202L      06301L      20103L      20105L      10602L      10604L      97160S
                        BICARBONT.  BICARBONT.  CARBONATE    CALCIUM     CALCIUM    HARDNESS    HARDNESS   DISCHARGE
                         (CALCD.)    (CALCD.)    (CALCD.)   DISSOLVED   DISSOLVED     TOTAL       TOTAL      INSTANT
                                                                         (CALCD.)    (CALCD.)
                 SUBM     HCO3        HCO3        CO3          CA          CA         CACO3       CACO3
                  ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        M3/S
SAMPLES(FLAGS)             1(0)        2(0)        1(0)        2(0)                   2(0)
           LOW             138.        138.          0.        34.0                   122.0
          HIGH             138.        176.          0.        46.0                   164.3
       AVERAGE                         157.                    40.0                   143.1
      STD.DEV.                          27.                     8.5                    29.9
   PERCNT:10TH
          25TH
   MEDIAN 50TH                         157.                    40.0                   143.1
          75TH
          90TH
SECONDARY CODE                                              10L

                          11103L      12102L      19103L      09107L      17203L      16306L      26009L      26304L
                          SODIUM    MAGNESIUM   POTASSIUM    FLUORIDE    CHLORIDE    SULPHATE      IRON        IRON
                        DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED   DISSOLVED     TOTAL      EXTRBLE.

                 SUBM      NA          MG          K           F           CL          SO4         FE          FE
                  ID      MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)             2(0)        2(0)        2(0)        2(0)        2(0)        2(0)                    2(0)
           LOW              7.0         9.0        1.60        .140        3.00        35.0                   1.640
          HIGH             12.0        12.0        1.70        .180        7.00        52.0                    .350
       AVERAGE              9.5        10.5        1.65        .160        5.00        43.5                    .995
      STD.DEV.              3.5         2.1         .07        .028        2.83        12.0                    .912
   PERCNT:10TH
          25TH
   MEDIAN 50TH              9.5        10.5        1.65        .160        5.00        43.5                    .995
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0004 -  0006 PAGE 204                              NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                             INDUSTRIAL MONITORING
STATION 20AL05EC1000    LAT. 53D 53M 45S  LONG. 112D 55M  0S   PR 3   UTM 12 374050E 5973400N  FOR APR 11, 1984 TO JUN 05, 1984
SIL SILICA LTD. BRUDERHEIM                   SETTLING POND EFFLUENT GRAB
SW S9 T57 R20 W4M

                             07105L        07205L        07562L        07021L        07906L        07905L        15421L        97160S
                            NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN      NITROGEN     PHOSPHORUS    DISCHARGE
                            DISSOLVED     DISSOLVED     DISSOLVED      TOTAL      PARTICULATE   PARTICULATE     TOTAL         INSTANT
                            NO3 & NO2     NITRITE       AMMONIA       KJELDAHL       TOTAL        (CALCD.)
                    SUBM       N             N             N             N             N             N             P
                     ID      MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          MG/L          M3/S
SAMPLES(FLAGS)               2(0)          2(1)          1(0)          2(0)          1(0)                        1(0)
           LOW               .190          L.050          .026          .900          .410                         .102
          HIGH               .450           .060          .026          .720          .410                         .102
       AVERAGE               .320           .055*                       .810
      STD.DEV.               .184           .007*                       .127
  PERCNT:10TH
          25TH
    MEDIAN 50TH              .320           .055*                       .810
          75TH
          90TH
SECONDARY CODE

                             10474L        10407L        10511L        10453L        14101L        97160S        97163S
                            RESIDUE       RESIDUE       RESIDUE       RESIDUE       SILICA       DISCHARGE     DISCHARGE
                             TOTAL      NONFILTRABLE   VOLATILE     FILTRABLE     REACTIVE       INSTANT        DAILY
                                                       NONFILTR.                                                 MEAN
                    SUBM                               (CALCD.)                     SIO2
                     ID      MG/L          MG/L          MG/L          MG/L          MG/L          M3/S          CFS
SAMPLES(FLAGS)               2(0)          3(0)                        2(0)          2(0)
           LOW               316.          116.                        200.          3.10
          HIGH               429.8          30.8                       330.0         1.00
       AVERAGE               372.9          82.2                       265.0         2.05
      STD.DEV.                80.5          45.2                        91.9         1.48
  PERCNT:10TH
          25TH
    MEDIAN 50TH              372.9          99.8                       265.0         2.05
          75TH
          90TH
SECONDARY CODE                                                                     02L

                             00205L        02074L        06537L        06524L        02001L        16101L        10701L        06608L
                             TOTAL       TURBIDITY      PHENOLIC      OIL AND        ODOUR       SULPHIDE      SURFACT.       CYANIDE
                            DISSOLVED                   MATERIAL      GREASE       THRESHOLD     DISSOLVED     N-ALKYL
                             SOLIDS                                                  NUMBER                    SULPHNTS.
                    SUBM                                PHENOL                                        S            LAS            CN
                     ID      MG/L          NTU           MG/L          MG/L           TON          MG/L          MG/L          MG/L
SAMPLES(FLAGS)               2(0)          2(0)          2(1)
           LOW               158.6          80.0         L.002
          HIGH               219.3          80.0          .003
       AVERAGE               189.0          80.0          .002*
      STD.DEV.                42.9            .0          .001*
  PERCNT:10TH
          25TH
    MEDIAN 50TH              189.0          80.0          .002*
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0007 -  0009 PAGE 205                       NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                     INDUSTRIAL MONITORING
STATION 20AL05EC1000    LAT. 53D 53M 45S  LONG. 112D 55M  0S   PR 3   UTM 12 374050E 5973400N  FOR APR 11, 1984 TO JUN 05, 1984
SIL SILICA LTD. BRUDERHEIM                  SETTLING POND EFFLUENT GRAB
SW S9 T57 R20 W4M

                        08304L      08202L      06107L      06154L      06001L      06051L      06006L      06905L
                        OXYGEN      OXYGEN      CARBON      CARBON      CARBON      CARBON      CARBON      CARBON
                         TOTAL      BIOCHEM.    DISSOLVED   DISSOLVED    TOTAL       TOTAL      TOTAL     PARTICULATE
                          COD     DEMAND-BOD    ORGANIC     INORGANIC   ORGANIC    INORGANIC                TOTAL
                 SUBM     02          02          C           C           C           C           C           C
                  ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           2(0)                    1(0)        1(0)                                            1(0)
           LOW           17.7                    5.00       35.20                                            2.67
          HIGH           19.5                    5.00       35.20                                            2.67
       AVERAGE           18.6
      STD.DEV.            1.3
  PERCNT:10TH
          25TH
   MEDIAN 50TH           18.6
          75TH
          90TH
SECONDARY CODE

                        24101L      24009L      24302L      80015L      80011L      27009L      27302L      47304L
                       CHROMIUM    CHROMIUM    CHROMIUM     MERCURY     MERCURY     COBALT      COBALT      SILVER
                      HEXAVALENT    TOTAL      EXTRBLE.     TOTAL       TOTAL       TOTAL      EXTRBLE.    EXTRBLE.

                 SUBM     CR          CR          CR          HG          HG          CO          CO          AG
                  ID    MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           1(1)        2(0)                    2(2)                    2(0)
           LOW          L.001        .004                   L.0001                   .005
          HIGH          L.001        .006                   L.0001                   .003
       AVERAGE                       .005                                            .004
      STD.DEV.                       .001                                            .001
  PERCNT:10TH
          25TH
   MEDIAN 50TH                       .005                   L.0001                   .004
          75TH
          90TH
SECONDARY CODE

                        29009L      29305L      28009L      28302L      48009L      48302L      82009L      82302L
                        COPPER      COPPER      NICKEL      NICKEL      CADMIUM     CADMIUM      LEAD        LEAD
                        TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.

                 SUBM     CU          CU          NI          NI          CD          CD          PB          PB
                  ID    MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           2(0)                    2(0)                    2(1)                                2(2)
           LOW           .005                    .016                    .002                               L.003
          HIGH           .003                    .012                   L.001                               L.003
       AVERAGE           .004                    .014                    .001*
      STD.DEV.           .001                    .003                    .001*
  PERCNT:10TH
          25TH
   MEDIAN 50TH           .004                    .014                    .001*                              L.003
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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REQUEST 0010 -  0012 PAGE 206                    NAQUADAT SUMMARY REPORT  JAN 08, 1986
                                                   INDUSTRIAL MONITORING
STATION 20AL05EC1000    LAT. 53D 53M 45S  LONG. 112D 55M  0S   PR 3   UTM 12 374050E 5973400N  FOR APR 11, 1984 TO JUN 05, 1984
SIL SILICA LTD. BRUDERHEIM                SETTLING POND EFFLUENT GRAB
SW S9 T57 R20 W4M

                        30009L      30305L      25003L      25304L      23009L      42304L      42009L      51003L
                         ZINC        ZINC      MANGANESE   MANGANESE   VANADIUM   MOLYBDENUM  MOLYBDENUM   ANTIMONY
                        TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL      EXTRBLE.     TOTAL       TOTAL

                 SUBM     ZN          ZN          MN          MN          V           MO          MO          SB
                  ID     MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           2(0)                    2(0)                    2(0)                    2(0)
           LOW            .021                    .166                    .009                    .005
          HIGH            .005                    .025                    .005                    .005
       AVERAGE            .013                    .096                    .007                    .005
      STD.DEV.            .011                    .100                    .003                    .000
  PERCNT:10TH
          25TH
   MEDIAN 50TH            .013                    .096                    .007                    .005
          75TH
          90TH
SECONDARY CODE

                        33005L      33104L      34005L      34102L      13111L      13306L      04102L      04304L
                        ARSENIC     ARSENIC    SELENIUM    SELENIUM    ALUMINUM    ALUMINUM   BERYLLIUM   BERYLLIUM
                       TOTAL      DISSOLVED   TOTAL       DISSOLVED   DISSOLVED    EXTRBLE.   DISSOLVED    EXTRBLE.

                 SUBM     AS          AS          SE          SE          AL          AL          BE          BE
                  ID     MG/L        MG/L        MG/L        MG/L        UG/L        MG/L        MG/L        MG/L
SAMPLES(FLAGS)           2(0)                    2(2)                                2(0)                    2(2)
           LOW           .0043                   L.0002                              3.990                   L.001
          HIGH           .0011                   L.0002                               .298                   L.001
       AVERAGE           .0027                                                       2.144
      STD.DEV.           .0023                                                       2.611
  PERCNT:10TH
          25TH
   MEDIAN 50TH           .0027                   L.0002                              2.144                   L.001
          75TH
          90TH
SECONDARY CODE
* THESE STATISTICS INCLUDE VALUES FLAGGED WITH L,G OR Q
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SECTION 4

Analytical data from the zoobenthos study conducted in 1982 in the study section of the North Saskatchewan River.

RIVER: North Saskatchewan River
SITE: Devon Left Bank
DATE: 17/05/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	1	-
NEMATODA					
undetermined	7	5	2	-	2
Mermithoidea	2	-	1	-	-
TURBELLARIA	-	-	1	-	-
OLIGOCHAETA					
Tubificidae	4	6	-	-	1
Naididae	4	4	2	4	-
Enchytraeidae	12	8	11	8	12
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	30	19	12	12	12
Baetis	8	10	6	4	9
Tricorythodes	-	-	-	-	-
Caenis	-	-	2	1	-
Rhithrogena	17	12	8	6	10
Heptagenia	-	-	-	-	-
Heptageniidae	-	-	1	3	8
Ephemeridae	-	1	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	1	-	4	4	-
Cheumatopsyche	11	-	-	-	3
Hydropsychidae	-	-	-	-	-
Glossosoma	1	-	-	-	-
Brachycentrus	-	-	4	6	3
Oecetis	-	-	1	-	-
Triaenodes	-	-	1	-	-
Psychomyia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	1	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: Devon Left Bank
DATE: 17/05/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	6	6	5	2	3
Alloperla	17	3	2	3	1
Isogenus	-	2	-	-	-
Pteronarcys	-	-	-	-	-
Taenionema	-	-	-	-	-
Undetermined Plecoptera	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	2	4	1	6	3
Tanytarsini	6	6	2	5	-
Orthocladiinae	42	66	36	37	41
Tanypodinae	1	1	-	-	-
Pupae/Adults	-	-	1	-	-
Ceratopogonidae	1	1	22	5	25
Tipulidae	-	-	-	-	-
Simuliidae	-	-	2	2	1
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	1	-	-
Empididae	3	13	13	3	9
COLEOPTERA					
Adults undetermined	-	-	-	-	-
Elmidae Larvae	-	-	-	-	-
Elmidae Adults	-	-	-	-	-
ACARI	3	3	3	2	1
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	1	-
Sphaerium	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Devon Right Bank
DATE: 17/05/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	1	-
NEMATODA					
Undetermined	5	2	3	-	1
Mermithoidea	-	-	4	-	1
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	-	-	1	1	1
Naididae	4	3	8	1	3
Enchytraeidae	14	11	53	2	1
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	18	23	21	3	6
Baetis	13	8	13	3	7
Tricorythodes	-	-	-	-	-
Caenis	-	-	-	-	-
Rhithrogena	6	9	3	3	12
Heptagenia	-	1	-	-	-
Heptageniidae	6	2	3	3	2
Ephemeridae	-	1	-	-	-
Undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	1	-	-	-
Cheumatopsyche	1	2	-	1	1
Hydropsychidae	-	-	-	-	-
Glossosoma	-	1	2	-	-
Brachycentrus	-	-	1	-	4
Oecetis	-	-	-	-	1
Triaenodes	-	-	-	-	-
Psychomyia	-	-	1	-	-
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: **Devon Right Bank**
DATE: 17/05/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	6	9	4	-	5
Alloperla	5	2	6	4	3
Isogenus	-	-	-	-	-
Pteronarcys	-	-	-	-	-
Taenionema	-	-	-	-	-
Undetermined Plecoptera	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	12	9	1	1	-
Tanytarsini	1	1	3	3	2
Orthocladiinae	66	23	40	43	41
Tanypodinae	-	-	-	-	-
Pupae/Adults	-	1	-	-	-
Ceratopogonidae	-	-	2	-	1
Tipulidae	-	-	-	-	-
Simuliidae	-	2	2	1	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	1	1	4	1	3
COLEOPTERA					
Adults undetermined	-	-	-	-	-
Elmidae Larvae	-	-	-	-	-
Elmidae Adults	-	-	-	-	-
ACARI	-	3	1	-	2
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	1
Ancylidae					
Ferrissia	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: E. L. Smith Left Bank
DATE: 03/06/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	4	30	1	8	8
Mermithoidea	2	2	-	6	1
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	-	5	2	9	1
Naididae	215	197	163	310	197
Enchytraeidae	14	13	3	13	4
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	54	21	33	40	28
Baetis	11	4	6	7	3
Tricorythodes	3	-	-	1	1
Caenis	-	-	-	-	-
Rhithrogena	5	1	-	2	-
Heptagenia	1	4	-	2	-
Heptageniidae	3	-	2	-	1
Ephemeridae	-	-	-	-	1
Undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	16	-	16	13	3
Cheumatopsyche	23	-	33	39	-
Hydropsychidae	-	-	-	-	-
Glossosoma	1	-	2	1	2
Brachycentrus	1	1	1	-	-
Oecetis	1	-	1	-	3
Triaenodes	-	-	-	-	-
Psychomyia	1	1	-	1	-
Lepidostoma	1	-	1	-	-
Neureclipsis	-	1	-	1	1
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: E. L. Smith Left Bank
DATE: 03/06/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	1	-	-	3	-
Alloperla	3	1	3	3	2
Isogenus	-	-	-	-	-
Pteronarcys	-	-	-	1	-
Taenionema	-	-	-	-	-
Undetermined Plecoptera	-	-	1	-	-
COLLEMBOLA	-	-	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	-	1
HEMIPTERA	2	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	5	18	5	6	9
Tanytarsini	10	6	12	8	1
Orthocladiinae	15	15	10	14	14
Tanypodinae	11	14	6	9	21
Pupae/Adults	2	-	3	5	2
Ceratopogonidae	2	2	1	1	2
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Rhagionidae	1	-	-	1	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	15	9	9	29	11
COLEOPTERA					
Adults undetermined	1	-	-	-	-
Elmidae Larvae	-	-	1	1	-
Elmidae Adults	-	-	-	-	-
ACARI	5	3	6	5	2
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: E. L. Smith Right Bank
DATE: 03/06/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	9	8	7	8	17
Mermithoidea	1	2	5	2	3
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	-	-	-	-	-
Naididae	105	45	99	102	137
Enchytraeidae	4	3	8	5	8
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	13	9	20	14	34
Baetis	2	6	3	1	3
Tricorythodes	-	1	-	-	-
Caenis	-	-	-	-	-
Rhithrogena	4	1	3	-	1
Heptagenia	3	-	-	2	2
Heptageniidae	2	-	4	3	2
Ephemeridae	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	11	3	13	3	9
Cheumatopsyche	20	16	33	22	25
Hydropsychidae	2	2	1	1	1
Glossosoma	1	3	2	1	2
Brachycentrus	-	-	-	1	-
Oecetis	-	-	1	-	-
Triaenodes	-	-	-	-	-
Psychomyia	1	-	-	1	2
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	1
Leptoceridae	-	-	-	-	1

SITE: E. L. Smith Right Bank
DATE: 03/06/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	-	3	-	-	-
Alloperla	1	1	-	-	2
Isogenus	-	-	-	-	-
Pteronarcys	-	-	-	-	-
Taenionema	-	-	-	-	-
undetermined Plecoptera	1	-	1	-	-
COLLEMBOLA	-	-	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	-	-	3	2	2
Tanytarsini	4	1	2	3	5
Orthocladiinae	7	7	10	5	6
Tanypodinae	6	6	7	1	11
Pupae/Adults	1	-	1	-	1
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	10	2	15	12	12
COLEOPTERA					
Adults undetermined	-	-	-	-	-
Elmidae Larvae	-	-	-	-	-
Elmidae Adults	-	-	-	-	-
ACARI	1	3	9	5	7
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	2	-
Sphaeriidae					
Pisidium	1	-	-	-	-
Sphaerium	-	-	-	-	-

RIVER: **North Saskatchewan River**
SITE: **Rossdale Right Bank**
DATE: 17/05/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	11	11	29	35	28
Mermithoidea	13	14	15	11	8
TURBELLARIA	-	1	-	-	-
OLIGOCHAETA					
Tubificidae	9	19	38	25	32
Naididae	10	18	24	10	9
Enchytraeidae	5	3	12	5	4
HIRUDINEA	1	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	40	35	41	27	29
Baetis	20	24	6	2	8
Tricorythodes	3	1	3	1	1
Caenis	1	1	1	-	-
Rhithrogena	5	3	-	-	1
Heptagenia	1	-	-	-	1
Heptageniidae	7	-	-	-	1
Ephemeridae	1	-	1	-	-
Undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	3	5	1	1	1
Cheumatopsyche	12	17	12	4	4
Hydropsychidae	-	-	-	-	-
Glossosoma	2	-	-	-	-
Brachycentrus	1	-	-	-	-
Oecetis	-	1	1	1	-
Triaenodes	-	-	-	-	-
Psychomyia	-	-	-	2	-
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: **Rossdale Right Bank**
DATE: 17/05/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	6	1	-	-	1
Alloperla	7	2	1	3	5
Isogenus	-	-	1	2	-
Pteronarcys	-	-	-	1	-
Taenionema	-	-	-	1	-
undetermined Plecoptera	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	2	4	4	6	15
Tanytarsini	4	12	11	6	7
Orthocladiinae	314	231	284	197	274
Tanypodinae	-	3	4	1	4
Pupae/Adults	6	3	4	3	4
Ceratopogonidae	1	6	1	2	-
Tipulidae	-	1	-	-	-
Simuliidae	1	-	1	2	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	21	43	33	38	30
COLEOPTERA					
Adults undetermined	-	-	1	-	-
Elmidae Larvae	-	-	-	-	-
Elmidae Adults	-	-	1	-	-
ACARI	5	9	14	8	3
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Rossdale Left Bank
DATE: 03/06/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	1	-	-
NEMATODA					
Undetermined	4	11	24	16	-
Mermithoidea	11	5	28	16	4
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	1	1	-	12	-
Naididae	13	12	28	64	44
Enchytraeidae	-	-	4	4	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	12	8	48	52	52
Baetis	34	11	88	68	84
Tricorythodes	-	1	-	8	-
Caenis	-	-	-	-	-
Rhithrogena	12	5	56	36	28
Heptagenia	5	-	4	-	-
Heptageniidae	4	2	36	28	24
Ephemeridae	-	-	-	-	-
Undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	4	8	20	20	8
Cheumatopsyche	3	1	12	1	8
Hydropsychidae	2	1	12	4	4
Glossosoma	-	-	1	12	2
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Triaenodes	-	-	-	-	-
Psychomyia	1	-	-	-	2
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: Rossdale Left Bank
DATE: 03/06/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	9	3	44	28	40
Alloperla	7	3	16	12	24
Isogenus	-	1	8	8	-
Pteronarcys	-	-	-	-	-
Taenionema	-	-	-	-	-
undetermined Plecoptera	-	-	16	-	4
COLLEMBOLA	-	-	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	4	-	4	12	-
Tanytarsini	2	-	-	-	-
Orthocladiinae	111	83	286	212	152
Tanypodinae	7	1	16	12	12
Pupae/Adults	11	6	28	32	8
Ceratopogonidae	4	-	4	4	-
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	7	1	8	4	4
COLEOPTERA					
Adults undetermined	-	-	-	-	-
Elmidae Larvae	-	-	-	-	-
Elmidae Adults	-	-	-	-	-
ACARI					
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-

RIVER:North Saskatchewan River
SITE: 50th Street Left Bank
DATE: 03/06/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	24	30	48	24	28
Mermithoidea	-	2	3	-	5
TURBELLARIA	-	2	3	7	-
OLIGOCHAETA					
Tubificidae	61	20	48	81	31
Naididae	58	47	115	72	74
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	22	22	20	12	59
Baetis	3	4	2	-	-
Tricorythodes	22	12	16	12	36
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	2	-	-	-
Heptageniidae	1	4	7	1	10
Ephemeridae	-	-	-	-	1
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	-	3	1	6
Cheumatopsyche	-	1	-	-	1
Hydropsychidae	-	-	-	-	-
Glossosoma	-	1	-	-	1
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Triaenodes	-	-	-	-	-
Psychomyia	1	-	1	1	3
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: 50th Street Left Bank
DATE: 03/06/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	-	2	1	-	2
Alloperla	-	3	1	-	1
Isogenus	-	-	-	-	-
Pteronarcys	-	-	-	-	-
Taenionema	-	-	-	-	-
undetermined Plecoptera	1	2	-	1	-
COLLEMBOLA	-	-	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	11	9	13	15	4
Tanytarsini	-	2	5	1	2
Orthocladiinae	32	26	55	42	34
Tanypodinae	13	7	7	1	16
Pupae/Adults	2	2	-	2	5
Ceratopogonidae	1	3	1	3	3
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	1	2	2	-	11
COLEOPTERA					
Adults undetermined	-	-	-	-	-
Elmidae Larvae	-	-	-	1	-
Elmidae Adults	-	-	-	-	-
ACARI	1	3	3	2	6
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae	-	-	-	-	-
Ferrissia	2	4	8	-	11
Sphaeriidae	-	-	-	-	-
Pisidium	-	2	-	-	1
Sphaerium	-	-	-	-	-

RIVER:North Saskatchewan River
SITE: 50th Street Right Bank
DATE: 03/06/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	20	54	6	30	6
Mermithoidea	24	8	3	8	14
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	16	24	7	5	4
Naididae	8	24	19	30	18
Enchytraeidae	-	3	1	-	1
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	80	28	49	40	25
Baetis	8	5	5	3	10
Tricorythodes	4	1	2	5	-
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	4	2	2	2	1
Ephemeridae	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	4	1	3	4	1
Cheumatopsyche	4	-	3	-	1
Hydropsychidae	1	-	2	2	-
Glossosoma	4	-	2	1	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Triaenodes	-	-	-	-	-
Psychomyia	2	-	-	-	1
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: 50th Street Right Bank
DATE: 03/06/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	8	1	5	5	8
Alloperla	12	1	3	4	8
Isogenus	-	-	-	-	-
Pteronarcys	-	-	-	-	-
Taenionema	-	-	1	-	-
undetermined Plecoptera	-	-	-	1	-
COLLEMBOLA	-	-	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	20	31	14	3	10
Tanytarsini	-	3	3	4	1
Orthocladiinae	80	23	44	51	51
Tanypodinae	12	3	15	5	8
Pupae/Adults	16	3	8	11	8
Ceratopogonidae	-	-	1	-	-
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	-	1	1	2	2
COLEOPTERA					
Adults undetermined	-	-	-	-	-
Elmidae Larvae	-	-	-	1	-
Elmidae Adults	-	-	-	-	-
ACARI	4	7	8	8	5
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	-	1	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Rundle Left Bank
DATE: 20/05/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	15	16	36	45	45
Mermithoidea	1	14	13	8	9
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	4	2	-	-	1
Naididae	1	12	9	3	4
Enchytraeidae	1	3	2	2	3
HIRUDINEA					
CRUSTACEA	-	-	-	-	-
Amphipoda					
Hyalella					
Gammarus	-	-	-	-	-
EPHEMEROPTERA	-	-	-	-	-
Ephemerella	31	50	14	52	43
Baetis	8	13	6	20	13
Tricorythodes	1	1	-	-	-
Caenis	-	-	-	-	-
Rhithrogena	5	10	2	11	28
Heptagenia	1	2	-	1	-
Heptageniidae	5	3	1	4	10
Ephemeridae	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	2	1	2	3	1
Cheumatopsyche	1	-	-	-	-
Hydropsychidae	-	-	-	-	-
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Triaenodes	-	-	-	-	-
Psychomyia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: **Rundle Left Bank**
DATE: 20/05/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	7	7	8	22	17
Alloperla	6	12	1	7	8
Isogenus	1	-	-	1	-
Pteronarcys	-	-	-	-	-
Taenionema	-	-	-	-	-
Undetermined Plecoptera	-	-	-	-	-
COLLEMBOLA	-	-	-	1	-
LEPIDOPTERA	2	1	1	5	8
ODONATA	-	-	-	-	-
HEMIPTERA	1	-	-	-	1
DIPTERA					
Chironomidae					
Chironomini	105	28	15	13	37
Tanytarsini	1	2	-	1	-
Orthocladiinae	49	91	26	40	66
Tanypodinae	-	1	1	4	1
Pupae/Adults	1	4	2	5	8
Ceratopogonidae	1	1	1	1	2
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	1	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	5	3	1	6	2
COLEOPTERA					
Adults undetermined	-	1	-	16	-
Elmidae Larvae	-	-	-	1	-
Elmidae Adults	-	-	-	1	-
ACARI	9	22	6	13	17
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Rundle Right Bank
DATE: 03/06/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	-	-	16	12	-
Mermithoidea	-	-	-	-	-
TURBELLARIA	428	-	8	-	-
OLIGOCHAETA					
Tubificidae	125	66	91	315	67
Naididae	1248	1806	667	1538	2172
Enchytraeidae	-	19	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	68	68	52	128	112
Baetis	20	12	8	40	28
Tricorythodes	-	-	-	-	-
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	8
Heptagenia	-	-	-	-	-
Heptageniidae	-	-	-	-	-
Ephemeridae	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	8	-	12	8	4
Cheumatopsyche	4	4	20	-	4
Hydropsychidae	-	-	-	-	-
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Triaenodes	-	-	-	-	-
Psychomyia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: **Rundle Right Bank**
DATE: 03/06/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	12	-	4	28	28
Alloperla	-	-	4	16	8
Isogenus	-	-	4	-	4
Pteronarcys	-	-	-	-	-
Taenionema	-	-	-	-	-
undetermined Plecoptera	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	40	80	60	40	52
Tanytarsini	-	4	-	4	8
Orthocladiinae	148	100	88	120	156
Tanypodinae	4	8	8	4	8
Pupae/Adults	32	24	28	32	44
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	4	-	-	4	-
COLEOPTERA					
Adults undetermined	-	-	-	-	-
Elmidae Larvae	-	-	-	-	-
Elmidae Adults	-	-	-	-	-
ACARI					
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Beverly Bridge Left Bank
DATE: 20/05/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	23	67	19	10	9
Mermithoidea	36	40	52	40	4
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	9	9	10	2	2
Naididae	8	15	17	2	7
Enchytraeidae	4	25	13	4	1
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	103	89	140	99	41
Baetis	14	10	17	20	6
Tricorythodes	8	14	10	9	5
Caenis	-	-	-	-	-
Rhithrogena	6	2	3	1	1
Heptagenia	1	1	3	-	1
Heptageniidae	3	1	6	3	4
Ephemeridae	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	3	6	8	8	1
Cheumatopsyche	2	2	4	2	4
Hydropsychidae	-	-	-	-	-
Glossosoma	1	3	1	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Triaenodes	-	-	-	-	-
Psychomyia	3	4	3	1	1
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: **Beverly Bridge Left Bank**
DATE: 20/05/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	10	13	16	13	2
Alloperla	3	2	4	3	2
Isogenus	1	-	2	-	2
Pteronarcys	-	-	1	-	-
Taenionema	1	-	-	-	-
Undetermined Plecoptera	-	-	-	-	-
COLLEMBOLA	-	-	1	3	-
LEPIDOPTERA	-	-	-	1	-
ODONATA	-	1	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	26	56	9	14	9
Tanytarsini	2	3	2	7	2
Orthocladiinae	106	261	174	150	93
Tanypodinae	2	4	8	5	4
Pupae/Adults	2	1	3	-	1
Ceratopogonidae	2	7	3	1	1
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	1	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	18	30	32	4	14
COLEOPTERA					
Adults undetermined	-	-	-	-	-
Elmidae Larvae	-	-	-	-	1
Elmidae Adults	-	-	-	-	-
ACARI	21	16	34	12	22
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Beverly Bridge Right Bank
DATE: 17/05/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	9	-	16	14	16
Mermithoidea	19	30	16	11	10
TURBELLARIA	-	1	-	-	-
OLIGOCHAETA					
Tubificidae	51	33	4	4	28
Naididae	25	27	27	31	34
Enchytraeidae	-	1	5	-	1
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	-	7	4	4	2
Baetis	3	3	1	2	-
Tricorythodes	-	-	-	1	1
Caenis	-	-	-	-	-
Rhithrogena	-	1	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	-	-	-	1	-
Ephemeridae	-	-	-	-	-
Undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	1	-	-	1
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	-	-	-	-	-
Glossosoma	1	1	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Triaenodes	-	-	-	-	-
Psychomyia	-	1	-	-	-
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: **Beverly Bridge Right Bank**
DATE: 17/05/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	-	3	-	-	-
Alloperla	-	1	-	-	-
Isogenus	-	-	-	-	-
Pteronarcys	-	-	-	-	-
Taenionema	-	-	-	-	-
undetermined Plecoptera	-	-	-	1	-
COLLEMBOLA	1	-	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	1	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	84	101	39	52	30
Tanytarsini	1	-	-	-	-
Orthocladiinae	223	214	244	267	200
Tanypodinae	2	1	-	-	-
Pupae/Adults	1	9	3	5	1
Ceratopogonidae	-	-	-	-	2
Tipulidae					
Simuliidae	-	2	-	1	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	4	7	4	5	1
COLEOPTERA					
Adults undetermined	-	-	-	-	-
Elmidae Larvae	-	-	-	-	-
Elmidae Adults	-	-	-	-	-
ACARI	2	-	-	2	1
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	-	1	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Cloverdale Left Bank
DATE: 20/05/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	4	24	4	4	48
Mermithoidea	-	8	12	5	32
TURBELLARIA	-	-	-	-	8
OLIGOCHAETA					
Tubificidae	1420	392	932	521	504
Naididae	92	56	40	17	36
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	-	4	-	14	8
Baetis	-	-	-	-	1
Tricorythodes	-	16	-	4	4
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	5	-
Heptageniidae	-	-	-	-	-
Ephemeridae	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	1	-	-	2
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	-	-	-	-	-
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Triaenodes	-	-	-	-	-
Psychomyia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: **Cloverdale Left Bank**
DATE: 20/05/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	-	4	1	3	6
Alloperla	-	-	-	1	1
Isogenus	-	-	-	-	-
Pteronarcys	-	-	-	-	-
Taenionema	-	-	-	-	-
undetermined Plecoptera	-	-	-	-	-
COLLEMBOLA	-	1	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	1	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	204	28	120	89	72
Tanytarsini	-	4	-	-	4
Orthocladiinae	96	80	108	57	128
Tanypodinae	-	-	-	2	-
Pupae/Adults	4	8	-	3	-
Ceratopogonidae	-	-	-	3	-
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	-	4	-	1	4
COLEOPTERA					
Adults undetermined	-	-	-	-	-
Elmidae Larvae	-	-	-	-	-
Elmidae Adults	-	-	-	-	-
ACARI	-	8	-	2	-
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	-	4	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-

SITE: Cloverdale Right Bank
DATE: 20/05/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	-	-	1	-	-
Alloperla	-	-	-	-	-
Isogenus	-	-	-	-	-
Pteronarcys	-	-	-	-	-
Taenionema	-	-	-	-	-
undetermined Plecoptera	-	-	-	-	-
COLLEMBOLA	-	1	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	316	372	111	120	144
Tanytarsini	4	-	1	-	-
Orthocladiinae	380	676	304	304	436
Tanypodinae	4	8	8	4	4
Pupae/Adults	8	20	7	8	16
Ceratopogonidae	-	4	-	-	8
Tipulidae	-	-	-	1	-
Simuliidae	-	1	-	-	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	-	-	2	-	-
COLEOPTERA					
Adults undetermined	1	-	1	-	-
Elmidae Larvae	-	-	-	-	-
Elmidae Adults	-	-	-	-	-
ACARI					
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	1
Planorbidae	-	-	-	-	-
Ancylidae	-	-	-	-	-
Ferrissia	-	1	5	8	4
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Cloverdale Right Bank
DATE: 20/05/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	24	12	1	12	28
Mermithoidea	40	16	13	16	8
TURBELLARIA	-	-	-	12	8
OLIGOCHAETA					
Tubificidae	1008	544	175	888	316
Naididae	344	196	49	212	252
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	-	2	5	8	-
Baetis	-	-	-	1	-
Tricorythodes	-	8	5	4	16
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	-	-	-	-
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	-	-	-	-	-
Glossosoma	-	-	1	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Triaenodes	-	-	-	-	-
Psychomyia	-	-	1	-	-
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

RIVER: North Saskatchewan River   Sorted By: B. Wright
SITE: Fort Saskatchewan Left Bank   Counts and Identification: A. M. Anderson
DATE: 20/05/82

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	33	33	18	190	141
Mermithoidea	16	28	51	50	15
TURBELLARIA	2	7	-	-	4
OLIGOCHAETA					
Tubificidae	93	33	6	8	38
Naididae	8	8	11	14	6
Enchytraeidae	43	15	10	57	64
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	50	49	58	2	24
Baetis	11	12	19	-	2
Tricorythodes	1	2	-	-	-
Caenis	-	-	-	-	-
Rhithrogena	-	1	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	-	-	1	-	-
Ephemeridae	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	48	68	110	1	32
Cheumatopsyche	-	1	-	-	1
Hydropsychidae	-	-	-	-	-
Glossosoma	8	22	33	1	5
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Triaenodes	-	-	-	-	-
Psychomyia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: **Fort Saskatchewan Left Bank**
DATE: 20/05/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	3	8	2	-	-
Alloperla	4	1	8	-	-
Isogenus	-	-	-	-	-
Pteronarcys	-	-	-	-	-
Taenionema	-	-	1	-	-
undetermined Plecoptera	-	-	-	-	-
COLLEMBOLA	-	1	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	23	13	19	43	30
Tanytarsini	1	2	1	-	-
Orthocladiinae	276	215	184	21	221
Tanypodinae	1	1	7	-	-
Pupae/Adults	1	2	1	-	1
Ceratopogonidae	1	1	2	1	6
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	4	3	2	-	-
COLEOPTERA					
Adults undetermined	-	-	-	-	-
Elmidae Larvae	-	-	-	-	-
Elmidae Adults	-	-	-	-	-
ACARI	11	14	27	-	3
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-

RIVER: North Saskatchewan River Sorted By: B. Wright
SITE: Fort Saskatchewan Right Bank Counts and Identification: A. M. Anderson
DATE: 20/05/82

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	4	12	-	-	4
Mermithoidea	140	20	60	20	152
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	672	176	512	376	532
Naididae	28	12	-	8	36
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	20	8	6	14	20
Baetis	1	-	-	1	2
Tricorythodes	2	4	2	2	2
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	2	-	2	-	1
Heptageniidae	2	1	1	-	-
Ephemeridae	-	-	-	-	-
Undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	61	11	11	14	55
Cheumatopsyche	-	-	1	-	1
Hydropsychidae	-	-	-	-	-
Glossosoma	3	1	1	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Triaenodes	-	-	-	-	-
Psychomyia	1	1	-	1	-
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: Fort Saskatchewan Right Bank
DATE: 20/05/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	15	12	4	10	20
Alloperla	7	3	4	3	6
Isogenus	-	-	-	-	1
Pteronarcys	-	-	-	-	-
Taenionema	-	-	-	-	-
undetermined Plecoptera	-	-	-	-	-
COLLEMBOLA	-	1	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	44	92	72	72	52
Tanytarsini	4	-	-	12	12
Orthocladiinae	696	1008	596	952	792
Tanypodinae	8	12	8	16	20
Pupae/Adults	-	-	-	12	12
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	-	-	-	-	-
COLEOPTERA					
Adults undetermined	-	3	-	-	-
Elmidae Larvae	-	-	1	-	-
Elmidae Adults	-	-	-	-	-
ACARI	8	1	2	-	4
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	1	-	2
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Sturgeon Left Bank
DATE: 20/05/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	36	24	12	8	8
Mermithoidea	16	12	4	20	36
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	320	1524	1464	372	116
Naididae	240	32	88	12	88
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	2	-
CRUSTACEA					
Amphipoda					
Hyalella	8	3	3	5	38
Gammarus	2	-	1	1	-
EPHEMEROPTERA					
Ephemerella	1	-	1	5	7
Baetis	-	-	-	1	-
Tricorythodes	3	-	2	4	28
Caenis	4	-	1	-	7
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	-	-	-	-	-
Ephemeridae	-	1	-	-	-
Undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	-	-	1	3
Cheumatopsyche	-	-	-	-	1
Hydropsychidae	-	-	-	-	-
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	1	-	-
Triaenodes	-	-	-	-	-
Psychomyia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: **Sturgeon Left Bank**
DATE: 20/05/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	1	2	-	2	1
Alloperla	-	-	-	-	-
Isogenus	-	-	-	-	-
Pteronarcys	-	-	-	-	-
Taenionema	-	-	-	-	-
Undetermined Plecoptera	-	-	-	-	-
COLLEMBOLA	1	-	-	-	-
LEPIDOPTERA	1	1	-	-	2
ODONATA	-	-	-	-	1
HEMIPTERA	2	1	1	-	3
DIPTERA					
Chironomidae					
Chironomini	68	64	52	16	140
Tanytarsini	4	-	-	8	444
Orthocladiinae	4	20	28	16	28
Tanypodinae	28	16	4	4	28
Pupae/Adults	-	-	-	4	-
Ceratopogonidae	-	12	-	-	4
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	1	-
Tanyderidae	-	-	-	-	-
Empididae	-	-	-	-	1
COLEOPTERA					
Adults Undetermined	3	1	1	2	4
Elmidae Larvae	2	2	3	8	6
Elmidae Adults	-	-	-	-	-
ACARI	1	-	-	2	2
MOLLUSCA					
Physidae	-	-	1	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	6	-	3	6	5
Sphaeriidae					
Pisidium	2	-	2	1	5
Sphaerium	1	-	-	-	-

RIVER: North Saskatchewan River
SITE: Sturgeon Right Bank
DATE: 20/05/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	4	40	56	-	36
Mermithoidea	-	12	8	4	16
TURBELLARIA	4	-	-	-	-
OLIGOCHAETA					
Tubificidae	384	284	580	252	984
Naididae	1184	888	2576	708	1940
Enchytraeidae	-	-	-	4	-
HIRUDINEA	-	1	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	2
EPHEMEROPTERA					
Ephemerella	2	2	1	-	-
Baetis	-	-	-	-	-
Tricorythodes	-	-	-	-	-
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	2
Heptageniidae	-	1	-	-	-
Ephemeridae	-	-	-	-	-
Undetermined Nymphules	-	-	-	-	1
TRICHOPTERA					
Hydropsyche	-	-	-	-	1
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	-	-	-	-	-
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Triaenodes	-	-	-	-	-
Psychomyia	-	-	-	1	-
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: **Sturgeon Right Bank**
DATE: 20/05/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	1	2	-	-	11
Alloperla	-	1	-	-	-
Isogenus	-	-	-	-	-
Pteronarcys	-	-	-	-	-
Taenionema	-	-	-	-	-
undetermined Plecoptera	-	-	-	-	-
COLLEMBOLA	-	-	1	-	1
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	120	48	120	132	252
Tanytarsini	4	-	-	-	8
Orthocladiinae	260	480	92	76	568
Tanypodinae	-	4	4	-	8
Pupae/Adults	-	-	4	-	12
Ceratopogonidae	1	-	-	-	-
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	-	-	-	-	-
COLEOPTERA					
Adults undetermined	-	-	1	1	1
Elmidae Larvae	-	-	-	-	-
Elmidae Adults	-	-	-	-	-
ACARI	-	-	-	8	-
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	4	24	-	-	3
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Vinca Bridge Left Bank
DATE: 28/05/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	40	149	164	196	204
Mermithcidea	41	75	36	96	76
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	217	669	264	252	280
Naididae	158	658	356	800	424
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	1	-	-	-
Gammarus	-	-	-	4	-
EPHEMEROPTERA					
Ephemerella	10	14	28	32	-
Baetis	-	-	-	-	-
Tricorythodes	33	38	40	32	44
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	1	2	8	-	-
Heptageniidae	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	6	9	8	8	-
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	-	1	4	4	-
Glossosoma	-	1	4	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	2	-	-	-
Triaenodes	1	-	-	-	-
Psychomyia	4	5	12	8	4
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: Vinca Bridge Left Bank
DATE: 28/05/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	2	2	4	12	4
Alloperla	1	-	-	4	-
Isogenus	-	-	-	-	-
Pteronarcys	-	-	-	-	-
Taenionema	-	-	-	-	-
Undetermined Plecoptera	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	152	519	200	292	196
Tanytarsini	2	5	4	4	-
Orthocladiinae	96	206	180	152	248
Tanypodinae	30	49	36	32	32
Pupae/Adults	2	5	4	-	-
Ceratopogonidae	-	1	-	4	-
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	1	1	-	8	-
COLEOPTERA					
Adults Undetermined	-	-	-	-	-
Elmidae Larvae	1	3	-	4	-
Elmidae Adults	-	-	-	-	-
ACARI	2	2	-	8	-
MOLLUSCA					
Physidae	-	2	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	1	1	-	4	4
Sphaeriidae					
Pisidium	2	1	-	-	-
Sphaerium	1	-	-	-	-

RIVER: North Saskatchewan River
SITE: Vinca Bridge Right Bank
DATE: 28/05/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	8	8	12	8	-
Mermithoidea	148	48	52	72	-
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	224	336	228	460	80
Naididae	44	184	64	208	88
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	28	26	20	11	20
Baetis	4	-	-	-	-
Tricorythodes	20	24	20	16	16
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	8	-	-	4	4
Heptageniidae	-	-	-	-	-
Ephemeridae	-	-	-	-	-
undetermined Nymphules	4	-	-	12	-
TRICHOPTERA					
Hydropsyche	236	36	82	100	192
Cheumatopsyche	4	4	-	-	-
Hydropsychidae	-	-	-	-	-
Glossosoma	-	-	-	-	4
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	4
Triaenodes	-	-	-	-	-
Psychomyia	8	-	4	4	-
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: Vinca Bridge Right Bank
DATE: 28/05/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	12	16	12	12	4
Alloperla	4	-	4	-	-
Isogenus	-	-	-	-	-
Pteronarcys	-	-	-	-	-
Taenionema	-	-	-	-	-
Undetermined Plecoptera	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	100	176	80	204	88
Tanytarsini	-	-	8	4	-
Orthocladiinae	436	362	300	284	476
Tanypodinae	124	36	108	72	72
Pupae/Adults	12	16	20	44	8
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	1	-	-	-	-
COLEOPTERA					
Adults Undetermined	-	-	-	-	-
Elmidae Larvae	-	-	-	-	-
Elmidae Adults	-	-	-	-	-
ACARI	12	-	8	-	-
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	12	-
Sphaeriidae					
Pisidium	-	-	4	-	-
Sphaerium	4	-	-	-	-

RIVER: North Saskatchewan River
SITE: Pakan Left Bank
DATE: 28/05/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	11	13	11	21	24
Mermithoidea	4	12	8	5	5
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	14	61	23	26	84
Naididae	9	4	21	12	24
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	1
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	17	9	24	21	31
Baetis	9	4	3	11	9
Tricorythodes	15	22	27	39	41
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	4
Heptageniidae	1	3	-	3	2
Ephemeridae	-	-	-	-	-
Undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	2	4	9	45	55
Cheumatopsyche	4	2	2	7	8
Hydropsychidae	1	3	-	1	1
Glossosoma	1	3	-	3	3
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Triaenodes	-	-	-	-	-
Psychomyia	-	-	1	2	5
Lepidostoma	-	-	-	-	-
Neureclipsis	1	-	-	-	1
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	1

SITE: **Pakan Left Bank**
DATE: 28/05/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	8	-	6	8	45
Alloperla	-	-	1	3	9
Isogenus	-	-	-	-	-
Pteronarcys	-	-	1	-	-
Taenionema	-	-	-	-	-
Undetermined Plecoptera	-	1	-	-	-
COLLEMBOLA	-	-	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	2	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	61	41	73	68	120
Tanytarsini	1	1	1	1	8
Orthocladiinae	64	46	29	156	184
Tanypodinae	9	2	4	20	24
Pupae/Adults	3	5	4	4	8
Ceratopogonidae	2	-	1	1	-
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	-	-	-	1	1
COLEOPTERA					
Adults Undetermined	-	-	-	-	-
Elmidae Larvae	-	-	-	2	1
Elmidae Adults	-	-	-	-	-
ACARI	5	2	5	4	5
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	1
Sphaerium	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Pakan Right Bank
DATE: 28/05/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	1	-	1
NEMATODA					
Undetermined	12	40	4	4	1
Mermithoidea	4	16	20	8	1
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	48	1080	112	323	26
Naididae	16	160	8	10	1
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	1	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	20	24	12	2	2
Baetis	-	4	-	1	1
Tricorythodes	8	24	1	3	2
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	3	2	6
Heptageniidae	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Undetermined Nymphules	16	28	9	4	4
TRICHOPTERA					
Hydropsyche	52	20	13	5	68
Cheumatopsyche	-	8	1	-	2
Hydropsychidae	16	24	12	9	17
Glossosoma	4	-	2	-	13
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Triaenodes	-	-	-	-	-
Psychomyia	-	-	4	1	2
Lepidostoma	-	-	-	-	-
Neureclipsis	-	-	-	-	-
Onocosmoecus	-	-	-	-	-
Hydroptila	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-

SITE: **Pakan Right Bank**
DATE: 28/05/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
PLECOPTERA					
Isoperla	32	12	96	3	9
Alloperla	-	-	-	-	1
Isogenus	-	-	-	-	-
Pteronarcys	-	-	-	-	-
Taenionema	-	-	-	-	-
Undetermined Plecoptera	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
LEPIDOPTERA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	28	280	8	20	6
Tanytarsini	-	4	-	1	-
Orthocladiinae	416	584	260	272	74
Tanypodinae	24	56	24	11	8
Pupae/Adults	8	40	36	20	5
Ceratopogonidae	-	8	-	1	-
Tipulidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Culicidae	-	-	-	-	-
Tanyderidae	-	-	-	-	-
Empididae	-	-	-	-	1
COLEOPTERA					
Adults Undetermined	-	4	-	-	1
Elmidae Larvae	4	-	-	1	1
Elmidae Adults	-	-	-	-	-
ACARI	4	8	4	1	-
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	2	-	1
Sphaerium	-	-	-	-	1

RIVER: North Saskatchewan River
SITE: Devon Left Bank
DATE: 10/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	4	4	-	1	1
Mermithoidea	2	2	-	-	-
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	-	-	1	2	-
Naididae	1	5	8	13	7
Enchytraeidae	15	13	23	37	14
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	2	-	-	-	-
Baetis	-	-	-	-	-
Tricorythodes	-	-	-	-	1
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	1	-	-	-
Heptageniidae	-	4	6	3	9
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
Paraleptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
Undetermined Nymphules	1	2	1	2	1
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	-	-	1	-
Cheumatopsyche	-	-	-	-	-
Arctopsyche	-	-	-	-	-
Hydropsychidae	2	1	3	6	1
Glossosoma	-	1	2	-	1
Brachycentrus	-	-	1	2	1
Oecetis	-	-	-	-	-
Ceraclea	-	-	1	2	-
Leptoceridae	-	-	-	-	-
Hydroptila	-	-	-	-	-
Neotrichia	-	-	-	-	-

SITE: **Devon Left Bank**
DATE: 10/08/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	-	-	-	-	-
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	1	-	-	-
undetermined	7	5	3	4	5
COLLEMBOLA	1	-	-	-	-
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	1	-	2	5	3
Tanytarsini	-	-	1	-	-
Orthocladiinae	8	5	7	5	10
Tanypodinae	-	-	-	-	-
Pupae	-	4	3	6	6
Ceratopogonidae	20	17	19	6	16
Tipulidae	1	-	-	-	2
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	-	1	-	1	-
Simuliidae	-	-	-	-	-
Adults	-	-	4	-	-
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	-	-
ACARI	-	2	-	2	2
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Devon Right Bank
DATE: 10/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	1	10	2	14	10
Mermithoidea	5	3	2	5	8
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	1	5	2	7	5
Naididae	29	39	21	46	21
Enchytraeidae	19	14	9	32	30
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	-	1	1	1	1
Baetis	-	-	1	-	1
Tricorythodes	-	1	-	-	1
Caenis	-	-	-	-	-
Rhithrogena	2	-	1	1	1
Heptagenia	2	1	1	-	-
Heptageniidae	5	7	9	11	9
Ephemera	-	-	-	-	-
Ephemeridae	-	-	1	-	-
Pseudocloeon	-	-	-	-	1
Paraleptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
Undetermined Nymphules	4	2	2	5	2
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	3	5	5	5	-
Cheumatopsyche	-	-	-	-	-
Arctopsyche	1	-	-	1	-
Hydropsychidae	8	7	19	13	15
Glossosoma	-	1	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	1
Ceraclea	-	-	-	-	-
Leptoceridae	16	12	11	38	29
Hydroptila	-	-	-	-	-
Neotrichia	2	1	-	1	-

SITE: **Devon Right Bank**
DATE: 10/08/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	-	-	-	-	1
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	1	-	-
Undetermined	11	16	7	16	21
COLLEMBOLA	-	-	-	-	-
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	7	17	4	2	24
Tanytarsini	5	11	6	6	7
Orthocladiinae	2	-	-	-	2
Tanypodinae	1	1	2	1	1
Pupae	-	-	-	-	-
Ceratopogonidae	-	-	-	-	-
Tipulidae	1	-	-	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	1	-	-
Empididae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adults	2	3	4	3	5
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	-	-
ACARI	3	-	1	4	1
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: E.L. Smith Left Bank
DATE: 10/8/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	1	-	-
NEMATODA					
undetermined	5	9	3	4	7
Mermithoidea	-	5	-	5	4
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	4	1	-	-	-
Naididae	36	14	7	1	2
Enchytraeidae	26	20	12	12	9
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	-	-	-	-	-
Baetis	-	-	-	-	-
Tricorythodes	-	-	-	-	-
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	-	1	-	-	-
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	-	-	-	-	
Paraleptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
undetermined Nymphules	3	2	1	3	3
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	-	-	-	-
Cheumatopsyche	-	-	-	-	-
Arctopsyche	-	-	-	-	-
Hydropsychidae	34	-	-	1	1
Glossosoma	-	-	-	-	1
Brachycentrus	1	2	-	-	2
Oecetis	-	1	1	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Hydroptila	-	-	-	-	-
Neotrichia	-	-	-	-	-

SITE: E.L. Smith Left Bank
DATE: 10/8/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	-	-	-	-	-
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
undetermined	2	1	-	2	3
COLLEMBOLA	-	-	-	-	-
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	1	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	21	8	11	14	8
Tanytarsini	1	4	-	6	7
Orthocladiinae	11	4	5	10	9
Tanypodinae	-	-	-	-	-
Pupae	1	-	-	1	1
Ceratopogonidae	1	-	-	2	1
Tipulidae	-	-	1	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	-	1	-	-	1
Simuliidae	-	-	-	-	-
Adults	-	-	-	-	-
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	1	-	-	-	-
Elmidae	-	-	-	-	-
ACARI	1	1	1	-	1
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae	-	-	-	-	-
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: E.L. Smith Right Bank
DATE: 10/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	6	18	1	2	9
Mermithoidea	2	3	5	1	1
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	8	13	4	12	14
Naididae	10	9	8	1	11
Enchytraeidae	10	9	6	8	27
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	3	8	-	4	3
Baetis	1	4	-	-	-
Tricorythodes	2	2	1	1	1
Caenis	-	-	-	-	-
Rhithrogena	-	-	1	-	2
Heptagenia	-	4	1	-	-
Heptageniidae	13	8	9	-	10
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	-	-	1	-	3
Paraleptophlebia	-	1	-	-	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
undetermined Nymphules	3	6	2	-	6
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	20	21	16	12	12
Cheumatopsyche	2	1	1	-	4
Arctopsyche	-	-	-	-	-
Hydropsychidae	14	15	17	8	23
Glossosoma	8	2	3	-	1
Brachycentrus	2	-	-	1	2
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	1	2	1	1	7
Hydroptila	-	-	-	-	-
Neotrichia	2	1	-	2	-

SITE: E.L. Smith Right Bank
DATE: 10/8/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	-	-	1	-	1
Adults	-	1	-	-	-
PLECOPTERA					
Isogenus	-	1	-	-	-
Acroneuria	1	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
Undetermined	14	21	9	6	15
COLLEMBOLA	-	-	-	-	-
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	1	1	-	1	-
DIPTERA					
Chironomidae					
Chironomini	2	2	1	3	11
Tanytarsini	26	21	12	11	17
Orthocladiinae	23	46	39	23	31
Tanypodinae	8	2	2	1	7
Pupae	3	4	-	1	1
Ceratopogonidae	-	1	1	-	1
Tipulidae	-	-	-	-	1
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	1	2	2	1	7
Simuliidae	-	-	-	-	-
Adults	2	4	9	6	5
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	1	-	-
Elmidae	1	-	-	-	1
ACARI	9	14	15	8	13
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	2	-	2	1	2

RIVER: North Saskatchewan River
SITE: Rossdale Left Bank
DATE: 09/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	2	-	-	-	1
NEMATODA					
Undetermined	29	13	17	21	14
Mermithoidea	5	3	2	3	2
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	15	10	15	25	7
Naididae	41	12	15	12	1
Enchytraeidae	1	1	-	1	2
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	3	4	3	2	4
Baetis	1	3	2	1	2
Tricorythodes	1	2	2	1	-
Caenis	-	-	-	-	-
Rhithrogena	12	20	23	7	3
Heptagenia	-	2	2	2	-
Heptageniidae	29	25	24	14	8
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	-	-	1	-	-
Paraleptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
Undetermined Nymphules	7	6	7	3	4
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	5	2	7	4	8
Cheumatopsyche	2	1	1	1	-
Arctopsyche	-	-	1	1	-
Hydropsychidae	14	19	26	23	4
Glossosoma	3	9	6	9	3
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Hydroptila	-	-	-	-	-
Neotrichia	-	-	-	1	-

SITE: Rossdale Left Bank
DATE: 09/08/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	-	-	-	-	-
Adults	-	-	1	-	-
PLECOPTERA					
Isogenus	2	2	4	-	5
Acroneuria	-	-	1	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
undetermined	35	21	31	15	13
COLLEMBOLA	1	-	-	-	-
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	-	-	-	-	1
DIPTERA					
Chironomidae					
Chironomini	8	4	10	14	7
Tanytarsini	14	10	10	5	3
Orthocladiinae	158	112	164	133	121
Tanypodinae	-	2	-	-	2
Pupae	8	1	2	5	2
Ceratopogonidae	1	-	-	1	-
Tipulidae	-	-	-	1	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	-	-	-	-	-
Simuliidae	-	-	-	1	-
Adults	11	1	10	3	11
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	1	1
ACARI	5	7	1	2	2
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	1	-	2

RIVER: North Saskatchewan River
SITE: Rossdale Right Bank
DATE: 09/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	46	13	14	17	16
Mermithoidea	-	7	3	4	6
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	62	1	3	3	14
Naididae	37	6	10	13	4
Enchytraeidae	3	1	1	1	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	-	-	-	1	-
Baetis	-	-	-	-	-
Tricorythodes	2	-	-	-	-
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	1	3	1	-	-
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
Paraleptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
Undetermined Nymphules	5	1	1	-	-
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	-	-	-	-
Cheumatopsyche	-	-	-	-	-
Arctopsyche	-	-	-	-	-
Hydropsychidae	28	3	-	4	2
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	2	-	-
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	1	-	1	1	-
Hydroptila	-	-	-	-	-
Neotrichia	-	-	-	-	-

SITE: Rossdale Right Bank
DATE: 09/08/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	-	-	-	-	-
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
undetermined	1	-	3	-	2
COLLEMBOLA	-	-	1	-	-
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	-	-	1	-	-
DIPTERA					
Chironomidae					
Chironomini	107	2	8	14	8
Tanytarsini	3	1	1	-	-
Orthocladiinae	47	7	11	13	6
Tanypodinae	2	-	-	3	-
Pupae	7	-	1	-	-
Ceratopogonidae	-	-	1	-	-
Tipulidae	1	-	-	1	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	-	-	-	-	-
Simuliidae	-	1	-	-	-
Adults	3	-	1	1	1
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	-	-
ACARI	1	-	1	2	-
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae	-	-	-	-	-
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: 50th Street Left Bank
DATE: 10/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	47	57	12	21	13
Mermithoidea	4	10	7	6	3
TURBELLARIA	10	17	2	-	2
OLIGOCHAETA					
Tubificidae	42	25	68	7	10
Naididae	36	25	60	27	41
Enchytraeidae	1	4	4	2	6
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	-	-	1	1	-
Baetis	-	-	-	-	-
Tricorythodes	6	1	3	4	5
Caenis	-	-	-	-	-
Rhithrogena	1	-	-	-	-
Heptagenia	3	-	3	1	2
Heptageniidae	27	4	30	32	52
Ephemera	-	-	-	-	1
Ephemeridae	-	-	-	-	-
Pseudocloeon	-	-	1	-	2
Paraleptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
Undetermined Nymphules	11	1	3	8	32
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	12	10	16	9	38
Cheumatopsyche	1	-	1	-	-
Arctopsyche	-	-	-	-	2
Hydropsychidae	7	3	2	4	19
Glossosoma	6	4	11	5	6
Brachycentrus	-	-	-	1	2
Oecetis	-	-	-	-	-
Ceraclea	1	1	-	-	-
Leptoceridae	-	-	-	-	-
Hydroptila	-	-	-	-	1
Neotrichia	-	-	-	-	-

SITE: 50th Street Left Bank
DATE: 10/08/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	-	-	1	-	1
Adults	-	1	1	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
Undetermined	13	11	7	21	19
COLLEMBOLA	1	1	-	-	-
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	13	-	2	2	-
DIPTERA					
Chironomidae					
Chironomini	11	16	11	9	10
Tanytarsini	15	9	20	15	40
Orthocladiinae	91	106	99	81	108
Tanypodinae	-	-	1	3	12
Pupae	7	7	5	1	9
Ceratopogonidae	1	-	-	-	-
Tipulidae	-	-	1	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	-	-	1	1	1
Simuliidae	-	-	-	-	-
Adults	8	13	24	17	5
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	1	-	-
ACARI	6	2	2	2	8
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	1
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	-	6	5	-	1

RIVER: North Saskatchewan River
SITE: 50th Street Right Bank
DATE: 10/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	50	75	36	40	48
Mermithoidea	19	6	21	13	21
TURBELLARIA	-	6	-	1	-
OLIGOCHAETA					
Tubificidae	36	81	17	27	14
Naididae	23	20	17	22	36
Enchytraeidae	1	4	4	2	6
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	-	-	-	3	-
Baetis	-	-	-	-	-
Tricorythodes	10	3	5	5	3
Caenis	-	-	1	1	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	4	1	1
Heptageniidae	4	1	4	1	-
Ephemera	-	1	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
Paraleptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
Undetermined Nymphules	23	6	18	11	12
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	13	6	7	8	11
Cheumatopsyche	3	-	-	1	-
Arctopsyche	-	-	-	-	1
Hydropsychidae	1	2	2	5	3
Glossosoma	3	3	7	1	1
Brachycentrus	2	1	-	1	-
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	3	3	3	-	2
Hydroptila	4	2	-	3	3
Neotrichia	-	-	-	-	-

SITE: 50th Street Right Bank
DATE: 10/08/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	2	-	-	-	1
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
Undetermined	-	-	3	-	1
COLLEMBOLA	-	-	-	-	-
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	40	51	23	25	5
Tanytarsini	8	2	1	2	1
Orthocladiinae	137	106	110	92	90
Tanypodinae	2	2	-	1	1
Pupae	9	20	9	3	10
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	7	4	5	1	4
Simuliidae	-	-	-	-	-
Adults	-	-	-	-	-
COLEOPTERA					
Dytiscidae	1	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	-	-
ACARI	7	2	3	2	6
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	4	5	-	1	-

RIVER: North Saskatchewan River Sorted By: B. Wright
SITE: Rundle Footbridge Left Bank Counts and Identification: A. M. Anderson
DATE: 09/08/82

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	50	31	32	23	21
Mermithoidea	15	20	9	3	8
TURBELLARIA	-	-	1	-	-
OLIGOCHAETA					
Tubificidae	124	39	49	68	34
Naididae	18	15	84	17	13
Enchytraeidae	5	2	3	1	1
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	1	2	2	-	1
Baetis	-	1	-	-	-
Tricorythodes	2	5	4	8	4
Caenis	-	-	-	-	-
Rhithrogena	2	10	-	1	11
Heptagenia	6	9	3	1	7
Heptageniidae	17	41	7	16	36
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
Paraleptophlebia	-	-	-	2	1
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
undetermined Nymphules	9	11	27	5	13
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	9	6	5	16	14
Cheumatopsyche	1	-	-	1	-
Arctopsyche	-	-	-	-	-
Hydropsychidae	13	29	5	19	63
Glossosoma	2	10	1	2	5
Brachycentrus	-	-	2	1	-
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	1	-	-
Hydroptila	-	1	-	2	1
Neotrichia	-	1	-	-	1

SITE: Rundle Footbridge Left Bank
DATE: 09/08/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	1	-	1	1	1
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	3	-	-	6
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
undetermined	11	14	8	8	28
COLLEMBOLA	-	-	-	-	-
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	-	-	-	5	-
DIPTERA					
Chironomidae					
Chironomini	20	5	11	7	6
Tanytarsini	8	13	9	10	21
Orthocladiinae	72	52	75	138	100
Tanypodinae	4	2	1	2	2
Pupae	2	2	4	2	3
Ceratopogonidae	1	-	-	-	-
Tipulidae	-	-	-	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	1	2	-	-	1
Simuliidae	-	-	-	-	-
Adults	1	2	7	9	6
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	-	-
ACARI	2	11	5	10	21
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	-	3	-	2	5

RIVER: North Saskatchewan River Sorted By: B. Wright
SITE: Rundle Footbridge Right Bank Counts and Identification: A. M. Anderson
DATE: 09/08/82

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	2	4	-	4	-
Mermithoidea	-	8	4	4	-
TURBELLARIA	2	4	-	-	-
OLIGOCHAETA					
Tubificidae	36	76	48	60	132
Naididae	858	1644	572	288	832
Enchytraeidae	-	4	-	8	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	6	4	8	-	4
Baetis	7	16	4	12	8
Tricorythodes	1	-	-	-	4
Caenis	-	-	-	-	-
Rhithrogena	9	-	12	4	-
Heptagenia	14	8	-	-	16
Heptageniidae	-	-	-	-	-
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	-	8	4	4	4
Paraleptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
undetermined Nymphules	4	-	8	4	4
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	13	44	4	-	12
Cheumatopsyche	1	-	-	-	-
Arctopsyche	-	-	1	-	-
Hydropsychidae	8	64	8	8	48
Glossosoma	2	8	8	-	4
Brachycentrus	5	-	-	-	-
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Hydroptila	1	-	-	-	-
Neotrichia	-	-	-	-	-

SITE: Rundle Footbridge Right Bank
DATE: 09/08/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	-	-	-	-	-
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	1	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
Undetermined	11	24	32	8	24
COLLEMBOLA	-	-	-	-	-
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	39	120	12	4	44
Tanytarsini	5	-	8	8	4
Orthocladiinae	170	224	180	144	180
Tanypodinae	2	4	-	-	4
Pupae	11	12	20	-	8
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adults	1	-	-	-	-
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	-	-
ACARI	-	-	-	-	4
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Beverly Bridge Left Bank
DATE: 09/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	228	416	364	332	740
Mermithoidea	-	-	8	-	-
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	80	140	72	120	216
Naididae	80	36	24	16	28
Enchytraeidae	12	-	-	-	-
HIRUDINEA	1	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	1	-	-	-	-
Baetis	-	-	-	-	-
Tricorythodes	7	7	1	7	1
Caenis	-	-	-	1	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	1
Heptageniidae	3	2	1	-	1
Ephemera	-	-	-	-	-
Ephemeridae	-	-	1	-	-
Pseudocloeon	-	-	-	-	-
Paraleptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
undetermined Nymphules	1	8	2	11	1
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	4	-	-	3	-
Cheumatopsyche	1	-	-	-	-
Arctopsyche	-	-	-	-	-
Hydropsychidae	-	3	-	-	-
Glossosoma	-	1	-	1	-
Brachycentrus	1	-	-	-	-
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	3	1	1	4	-
Hydroptila	-	-	-	-	-
Neotrichia	-	-	-	-	-

SITE: Beverly Bridge Left Bank
DATE: 09/08/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	-	-	-	-	-
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	1	-
Perlodidae	-	-	-	-	-
undetermined	1	5	-	1	-
COLLEMBOLA	-	-	-	-	-
ODONATA					
Ophiogomphus	-	-	-	-	1
HEMIPTERA					
Corixidae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	112	164	108	112	128
Tanytarsini	4	16	4	-	-
Orthocladiinae	116	128	64	76	76
Tanypodinae	-	4	-	-	-
Pupae	12	24	12	8	12
Ceratopogonidae	-	-	1	-	-
Tipulidae	-	-	-	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	-	-	2	-	-
Simuliidae	-	-	-	-	-
Adults	-	-	-	-	4
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	-	-
ACARI	3	10	1	5	-
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	4	1	1	7	-

RIVER: North Saskatchewan River Sorted By: B. Wright
SITE: Beverly Bridge Right Bank Counts and Identification: A. M. Anderson
DATE: 09/08/82

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	10	9	31	4	16
Mermithoidea	9	2	10	10	3
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	7	3	11	1	6
Naididae	72	24	67	102	47
Enchytraeidae	9	2	1	3	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	-	-	-	-	-
Baetis	-	-	-	-	-
Tricorythodes	-	-	-	-	-
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	1	-	-	1	-
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	1	-	-	-	-
Paraleptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
Undetermined Nymphules	-	-	-	-	-
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	-	-	-	-
Cheumatopsyche	-	-	-	-	-
Arctopsyche	-	-	-	-	-
Hydropsychidae	3	-	-	2	-
Glossosoma	2	-	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Hydroptila	-	-	-	-	-
Neotrichia	-	-	-	-	-

SITE: **Beverly Bridge Right Bank**
DATE: 09/08/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	-	-	-	1	-
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
Undetermined	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	-	-	-	-	1
DIPTERA					
Chironomidae					
Chironomini	72	27	87	104	69
Tanytarsini	-	-	2	1	-
Orthocladiinae	67	22	93	143	62
Tanypodinae	2	1	-	-	-
Pupae	10	6	14	13	13
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Chaoboridae					
Chaoborus	-	1	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adults	-	-	2	2	-
COLEOPTERA					
Dytiscidae	-	1	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	-	-
ACARI	-	1	-	1	-
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Cloverdale Left Bank
DATE: 09/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	2	2	8	6	6
Mermithoidea	3	7	48	20	6
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	2	24	4	32	8
Naididae	66	12	60	66	108
Enchytraeidae	4	-	4	4	2
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	15	4	16	2	6
Baetis	-	5	-	-	-
Tricorythodes	15	6	40	42	74
Caenis	-	-	-	-	-
Rhithrogena	8	19	4	4	12
Heptagenia	9	2	-	2	4
Heptageniidae	39	21	32	48	70
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	3	20	8	2	10
Paraleptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
Undetermined Nymphules	-	5	2	2	2
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	28	37	36	8	4
Cheumatopsyche	1	-	4	-	-
Arctopsyche	-	1	-	-	-
Hydropsychidae	32	112	140	10	38
Glossosoma	3	9	-	8	8
Brachycentrus	-	-	-	-	1
Oecetis	1	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Hydroptila	-	1	-	-	-
Neotrichia	-	-	-	-	-

SITE: Cloverdale Left Bank
DATE: 09/08/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	-	1	-	-	-
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
undetermined	21	13	38	10	14
COLLEMBOLA	1	2	-	2	2
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	8	28	8	30	24
Tanytarsini	8	4	12	14	12
Orthocladiinae	265	340	288	478	496
Tanypodinae	2	4	4	4	-
Pupae	11	24	8	8	22
Ceratopogonidae	-	-	-	-	1
Tipulidae	-	-	-	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	2	3	-	8	2
Simuliidae	-	-	-	-	-
Adults	-	-	-	-	-
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	-	-
ACARI	4	7	28	24	12
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	1	-	-	-	-

RIVER: North Saskatchewan River
SITE: Cloverdale Right Bank
DATE: 09/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	20	40	16	20	14
Mermithoidea	94	92	84	53	58
TURBELLARIA	4	-	2	5	2
OLIGOCHAETA					
Tubificidae	34	72	144	44	80
Naididae	350	792	652	416	1040
Enchytraeidae	-	-	-	-	1
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	-	-	1	-	-
Baetis	-	-	-	-	-
Tricorythodes	144	44	149	63	117
Caenis	-	-	2	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	2	4	4	4	4
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	6	-	2	2	1
Paraleptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
undetermined Nymphules	-	-	1	11	11
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	2	8	7	4	8
Cheumatopsyche	-	-	-	-	-
Arctopsyche	-	-	-	-	-
Hydropsychidae	8	4	7	6	13
Glossosoma	18	16	17	11	14
Brachycentrus	-	-	-	1	-
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	2	2
Hydroptila	-	-	-	-	1
Neotrichia	-	-	-	-	-

SITE: **Cloverdale Right Bank**
DATE: 09/08/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	4	-	-	-	-
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
Undetermined	8	-	1	6	2
COLLEMBOLA	-	-	-	-	-
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	18	32	40	8	24
Tanytarsini	4	4	8	12	4
Orthocladiinae	272	276	544	308	452
Tanypodinae	32	12	28	12	32
Pupae	50	16	36	16	76
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	2	-	2	2	1
Simuliidae	-	-	-	-	-
Adults	-	-	-	-	-
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	-	-
ACARI	2	-	3	-	3
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	6	64	6	4	10

RIVER: North Saskatchewan River
SITE: Ft. Saskatchewan Left Bank
DATE: 17/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	1	2	10	6	30
Mermithoidea	12	8	14	58	-
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	273	132	404	238	84
Naididae	16	34	48	10	86
Enchytraeidae	-	-	2	4	4
HIRUDINEA	1	-	1	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	-	-	-	-	-
Baetis	-	1	-	-	-
Tricorythodes	6	7	6	9	4
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	1	-
Heptageniidae	4	1	1	3	1
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
Paraleptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	1	-
undetermined Nymphules	1	-	-	1	-
Adults	1	-	1	1	2
TRICHOPTERA					
Hydropsyche	2	-	2	7	1
Cheumatopsyche	-	-	-	-	1
Arctopsyche	-	-	-	-	-
Hydropsychidae	1	-	-	-	-
Glossosoma	-	1	1	1	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Hydroptila	1	-	-	-	-
Neotrichia	-	-	-	-	-

SITE: **Ft.** Saskatchewan Left Bank
DATE: 17/08/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	-	-	-	-	-
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
Undetermined	1	-	-	-	-
COLLEMBOLA	-	-	-	-	-
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	11	14	48	24	12
Tanytarsini	3	6	18	8	28
Orthocladiinae	74	56	64	76	52
Tanypodinae	-	-	-	12	-
Pupae	1	6	6	2	-
Ceratopogonidae	-	-	-	2	-
Tipulidae	-	-	-	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adults	3	6	6	8	9
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	-	-
ACARI	-	1	-	-	-
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	1	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	42	13	34	24	4

RIVER: North Saskatchewan River
SITE: Ft. Saskatchewan Right Bank
DATE: 17/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	5	-	1	6	-
Mermithoidea	31	37	38	24	32
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	137	584	234	972	102
Naididae	323	194	45	246	104
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	1	3	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	1	-	4	3	3
Baetis	1	-	4	7	4
Tricorythodes	19	18	556	35	112
Caenis	-	-	1	-	3
Rhithrogena	-	-	-	-	-
Heptagenia	1	-	24	3	13
Heptageniidae	2	2	45	2	13
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	-	-	4	-	-
Paraleptophlebia	-	1	3	2	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
Undetermined Nymphules	4	2	25	3	13
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	3	8	121	10	53
Cheumatopsyche	-	-	49	-	-
Arctopsyche	-	-	-	-	-
Hydropsychidae	9	3	-	13	43
Glossosoma	-	1	1	-	1
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Hydroptila	-	-	1	-	1
Neotrichia	-	-	-	-	-

SITE: Ft. Saskatchewan Right Bank
DATE: 17/08/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	-	-	1	1	3
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
Undetermined	-	-	7	2	5
COLLEMBOLA	-	-	1	-	-
ODONATA					
Ophiogomphus	-	1	-	-	-
HEMIPTERA					
Corixidae	7	-	1	2	-
DIPTERA					
Chironomidae					
Chironomini	4	11	25	30	12
Tanytarsini	19	16	9	16	5
Orthocladiinae	170	154	241	214	192
Tanypodinae	5	5	43	16	12
Pupae	1	7	4	16	11
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	1	-	3	2	-
Simuliidae	-	-	-	-	-
Adults	19	7	3	24	1
COLEOPTERA					
Dytiscidae	1	1	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	-	-
ACARI	1	-	-	-	-
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	1	5	16	5	1

RIVER: North Saskatchewan River
SITE: Sturgeon Left Bank
DATE: 17/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	16	16	-	-	8
Mermithoidea	4	8	4	-	-
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	147	176	268	168	248
Naididae	85	100	18	24	24
Enchytraeidae	-	-	-	-	-
HIRUDINEA	2	1	-	-	1
CRUSTACEA					
Amphipoda					
Hyalella	12	17	17	28	12
Ephemeroptera					
Ephemerella	1	-	-	-	-
Baetis	2	-	-	-	-
Tricorythodes	30	16	69	31	10
Caenis	-	2	1	-	-
Rhithrogena	1	-	-	-	-
Heptagenia	5	-	-	1	-
Heptageniidae	5	2	15	-	1
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
Paraleptophlebia	-	-	-	-	-
Centroptilum	-	3	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
undetermined Nymphules	2	2	4	4	2
Adults	4	-	-	4	2
TRICHOPTERA					
Hydropsyche	4	-	3	6	-
Cheumatopsyche	-	-	-	-	-
Arctopsyche	-	-	-	-	-
Hydropsychidae	1	-	-	2	-
Glossosoma	6	-	2	2	-
Brachycentrus	1	5	-	1	-
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	2	1
Leptoceridae	-	1	1	-	-
Hydroptila	1	-	6	1	-
Neotrichia	-	2	-	-	-

SITE: Sturgeon Left Bank
DATE: 17/08/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	14	2	7	12	5
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
undetermined	-	-	-	1	-
COLLEMBOLA	4	6	6	5	1
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	-	1	-	-	-
DIPTERA					
Chironomidae					
Chironomini	49	50	46	44	64
Tanytarsini	7	4	2	2	4
Orthocladiinae	39	26	62	28	24
Tanypodinae	4	4	4	6	-
Pupae	7	4	2	2	6
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	3	-	-	-	-
Simuliidae	-	-	-	-	-
Adults	17	9	2	6	6
COLEOPTERA					
Dytiscidae	-	2	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	10	4	4	1	1
ACARI	-	1	1	-	-
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	2	-	-	-
Sphaerium	-	-	1	-	-
Ancylidae					
Ferrissia	49	17	23	37	25

RIVER: North Saskatchewan River
SITE: Sturgeon Right Bank
DATE: 17/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	5	4	5	1	-
Mermithoidea	4	9	4	12	7
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	285	249	297	262	253
Naididae	71	57	36	74	43
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	1	2	1	2	2
Baetis	-	-	-	5	-
Tricorythodes	7	139	165	288	159
Caenis	2	-	1	1	-
Rhithrogena	-	-	-	-	-
Heptagenia	2	2	7	8	4
Heptageniidae	-	9	3	9	2
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	4	-	1	-	1
Paraleptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
Undetermined Nymphules	-	-	1	3	2
Adults	1	2	1	1	-
TRICHOPTERA					
Hydropsyche	11	52	31	39	23
Cheumatopsyche	-	-	-	-	-
Arctopsyche	-	-	-	-	-
Hydropsychidae	-	3	2	1	1
Glossosoma	-	3	1	1	1
Brachycentrus	-	-	1	-	-
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	2	-	-
Hydroptila	-	-	-	-	1
Neotrichia	-	-	-	-	-

SITE: Sturgeon Right Bank
DATE: 17/08/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	4	3	1	-	3
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
undetermined	-	2	3	10	-
COLLEMBOLA	4	2	2	3	2
ODONATA					
Ophiogomphus	-	-	-	-	1
HEMIPTERA					
Corixidae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	16	35	48	27	44
Tanytarsini	5	3	4	4	8
Orthocladiinae	79	144	94	89	89
Tanypodinae	9	25	9	24	17
Pupae	3	9	10	11	10
Ceratopogonidae	-	-	1	-	-
Tipulidae	-	-	-	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	-	-	-	2	-
Simuliidae	-	-	-	-	-
Adults	9	21	11	9	8
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	-	-
ACARI	-	-	-	1	-
MOLLUSCA					
Physidae	1	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	35	35	13	22	31

RIVER: North Saskatchewan River
SITE: Vinca Bridge Left Bank
DATE: 12/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	8	3	7	4	4
Mermithoidea	28	17	21	12	13
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	82	81	261	129	138
Naididae	39	21	31	78	65
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	1	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	-	-	-	-	-
Baetis	-	3	-	-	1
Tricorythodes	30	35	35	34	22
Caenis	-	1	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	2	-	1	1
Heptageniidae	1	2	6	6	4
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
Paraleptophlebia	-	-	-	-	1
Centroptilum	3	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
Undetermined Nymphules	2	-	-	-	2
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	5	6	10	1	6
Cheumatopsyche	-	-	-	-	-
Arctopsyche	-	-	-	-	-
Hydropsychidae	1	2	5	6	27
Glossosoma	1	1	2	-	5
Brachycentrus	-	-	-	1	-
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	3	2	1	-	2
Hydroptila	-	-	-	2	-
Neotrichia	-	-	-	-	-

SITE: Vinca Bridge Left Bank
DATE: 12/08/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	9	12	2	7	5
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
Undetermined	1	3	2	5	1
COLLEMBOLA	1	-	-	-	-
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	323	334	371	173	202
Tanytarsini	5	8	4	7	4
Orthocladiinae	33	270	245	277	330
Tanypodinae	5	5	4	4	4
Pupae	25	37	39	33	39
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	-	-	-	-	1
Simuliidae	-	-	-	-	-
Adults	1	22	10	27	43
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	1	-
ACARI	-	3	-	2	3
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	1	-	-	1	-
Sphaerium	-	-	1	-	-
Ancylidae					
Ferrissia	3	4	10	6	6

RIVER: North Saskatchewan River
SITE: Vinca Bridge Right Bank
DATE: 12/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	4	1	-	3	-
Mermithoidea	15	17	28	45	32
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	386	364	314	404	577
Naididae	64	33	61	53	67
Enchytraeidae	-	-	-	-	-
HIRUDINEA	3	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	-	-	-	-	-
Baetis	1	2	-	-	-
Tricorythodes	280	272	466	334	258
Caenis	1	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	2	8	23	7
Heptageniidae	7	18	24	37	20
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	-	-
Pseudocloeon	2	1	4	7	12
Paraleptophlebia	1	1	-	-	-
Centroptilum	-	-	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
Undetermined Nymphules	4	1	1	8	3
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	6	2	5	35	13
Cheumatopsyche	-	-	-	-	-
Arctopsyche	-	-	-	-	-
Hydropsychidae	28	4	13	49	11
Glossosoma	-	-	-	1	1
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	2	-	-	1	3
Hydroptila	1	-	1	1	-
Neotrichia	-	-	-	-	-

SITE: Vinca Bridge Right Bank
DATE: 12/08/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	28	8	17	33	21
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
Undetermined	3	2	2	13	3
COLLEMBOLA	-	-	-	-	-
ODONATA					
Ophiogomphus	-	-	-	-	-
HEMIPTERA					
Corixidae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	104	88	85	89	181
Tanytarsini	5	67	5	8	8
Orthocladiinae	305	214	239	354	374
Tanypodinae	19	13	13	19	24
Pupae	12	18	12	13	27
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	1	4	1	-	1
Simuliidae	-	-	-	-	-
Adults	7	4	3	7	1
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	-	-
ACARI	-	1	2	4	7
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	1	-	3
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	7	2	5	4	20

RIVER: North Saskatchewan River
SITE: Pakan Bridge Left Bank
DATE: 12/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	1	3	4	4	8
Mermithoidea	16	41	9	13	13
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	68	72	57	82	86
Naididae	11	9	20	16	8
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	-	-	1	-	-
Baetis	3	5	4	4	-
Tricorythodes	383	375	141	128	88
Caenis	1	1	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	3	-	15	10	-
Heptageniidae	100	106	98	116	17
Ephemera	-	-	-	-	-
Ephemeridae	-	1	-	-	-
Pseudocloeon	25	20	7	14	3
Paraleptophlebia	1	3	-	-	-
Centroptilum	9	23	5	18	-
Stenonema (Terminatum?)	-	-	-	-	-
Undetermined Nymphules	65	36	73	176	52
Adults	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	11	16	37	6	-
Cheumatopsyche	-	1	3	2	-
Arctopsyche	-	-	-	-	-
Hydropsychidae	24	33	83	44	1
Glossosoma	1	4	-	4	1
Brachycentrus	1	1	-	-	-
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	1	-	-	-	-
Hydroptila	-	-	-	-	-
Neotrichia	-	-	-	-	-

SITE: Pakan Bridge Left Bank
DATE: 12/08/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	-	-
Psychomyia	8	1	12	-	-
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	1	7	-	2	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
Undetermined	17	104	44	36	4
COLLEMBOLA	-	-	-	1	-
ODONATA					
Ophiogomphus	-	-	1	-	-
HEMIPTERA					
Corixidae	-	-	-	-	1
DIPTERA					
Chironomidae					
Chironomini	106	65	86	126	84
Tanytarsini	27	21	25	59	7
Orthocladiinae	113	149	168	148	32
Tanypodinae	13	8	3	13	5
Pupae	15	8	13	3	12
Ceratopogonidae	1	-	-	-	-
Tipulidae	-	-	-	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	-	1	1	3	-
Simuliidae	-	-	-	-	-
Adults	28	16	30	68	35
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	1	-	-
ACARI	5	1	4	14	-
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	3	2	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	1	-	3	12	1

RIVER: North Saskatchewan River
SITE: Pakan Bridge Right Bank
DATE: 12/08/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	4	-	-	-	1
Mermithoidea	70	20	15	61	20
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	116	114	262	90	133
Naididae	76	39	29	53	20
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Ephemeroptera					
Ephemerella	-	-	-	-	-
Baetis	8	16	1	1	-
Tricorythodes	249	121	112	166	104
Caenis	-	-	1	-	1
Rhithrogena	-	-	-	-	-
Heptagenia	7	9	4	11	-
Heptageniidae	72	40	15	82	52
Ephemera	-	-	-	-	-
Ephemeridae	-	-	-	1	-
Pseudocloeon	25	20	7	16	13
Paraleptophlebia	1	-	1	-	-
Centroptilum	-	1	-	-	-
Stenonema (Terminatum?)	-	-	-	-	-
undetermined Nymphules	124	82	173	180	141
Adults	-	-	1	1	-
TRICHOPTERA					
Hydropsyche	19	9	7	16	11
Cheumatopsyche	4	3	-	-	-
Arctopsyche	-	-	-	-	-
Hydropsychidae	20	17	3	13	9
Glossosoma	4	-	3	4	4
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Ceraclea	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Hydroptila	-	-	-	-	1
Neotrichia	-	-	-	-	-

SITE: Pakan Bridge Right Bank
DATE: 12/08/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Mayatrichia	-	-	-	1	-
Psychomyia	8	5	4	5	7
Adults	-	-	-	-	-
PLECOPTERA					
Isogenus	-	-	-	-	-
Acroneuria	-	-	-	-	-
Perlidae	-	-	-	-	-
Perlodidae	-	-	-	-	-
Undetermined	11	9	1	13	15
COLLEMBOLA	-	-	-	-	1
ODONATA					
Ophiogomphus	-	-	-	1	-
HEMIPTERA					
Corixidae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	45	25	40	35	23
Tanytarsini	5	4	5	9	1
Orthocladiinae	85	102	112	136	82
Tanypodinae	12	4	11	7	5
Pupae	12	5	3	8	3
Ceratopogonidae	-	1	-	-	-
Tipulidae	-	-	-	-	-
Chaoboridae					
Chaoborus	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Empididae	-	3	-	4	3
Simuliidae	-	-	-	-	-
Adults	73	247	242	233	247
COLEOPTERA					
Dytiscidae	-	-	-	-	-
Haliplidae	-	-	-	-	-
Elmidae	-	-	-	-	3
ACARI	8	5	1	4	1
MOLLUSCA					
Physidae	-	-	-	-	-
Lymnaeidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	1	1	1	-	7

RIVER: North Saskatchewan River Sorted By: B. Wright
SITE: Devon Left Bank Counts and Identification: A. M. Anderson
DATE: 23/9/82

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	3	7	1	5	6
NEMATODA					
Undetermined	1	-	1	1	-
Mermithoidea	-	1	-	-	-
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	-	-	-	-	-
Naididae	21	3	3	1	2
Enchytraeidae	1	5	8	1	6
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	2	9	4	7	1
Baetis	5	2	-	1	1
Tricorythodes	-	-	1	-	-
Caenis	-	-	-	-	-
Rhithrogena	8	4	15	4	9
Heptagenia	1	4	-	-	-
Heptageniidae	1	3	-	-	-
Paraleptophlebia	-	-	-	-	-
Leptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
Undetermined Nymphules	-	-	-	-	1
TRICHOPTERA					
Hydropsyche	-	2	-	-	-
Cheumatopsyche	-	1	2	-	1
Hydropsychidae	1	1	1	-	-
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	-	-	2
Oecetis	-	-	-	-	-
Psychomyia	-	-	-	-	-
Neureclipsis	-	-	-	-	-

SITE: Devon Left Bank
DATE: 23/9/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	1	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	-	-	2	-	-
Alloperla	-	-	-	-	-
Isogenus	2	8	-	2	-
Taenionema	7	3	-	4	2
Perlodidae	-	-	-	-	-
Chloroperlidae	2	1	1	15	5
Capniidae	-	-	-	-	-
undetermined	16	23	15	12	15
COLLEMBOLA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA	1	-	3	-	-
Corixidae					
COLEOPTERA					
Adults	-	-	-	-	-
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	2	-	2	-	-
Tanytarsini	4	6	2	10	4
Orthocladiinae	1	-	1	4	2
Tanypodinae	-	-	1	2	1
Pupae	-	-	-	-	-
Ceratopogonidae	12	11	30	12	14
Tipulidae	1	3	4	2	6
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	1	1	-	-	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	-	-	-	-	-
ACARI	-	-	1	-	1
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: **Devon Left Bank**
DATE: 23/9/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Devon Right Bank
DATE: 23/9/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	4	2	6	3	5
NEMATODA					
undetermined	-	1	2	-	1
Mermithoidea	1	3	2	6	-
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	1	-	-	-	-
Naididae	9	15	7	6	3
Enchytraeidae	3	7	-	8	1
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	-	1	13	11	6
Baetis	-	2	13	-	1
Tricorythodes	-	-	1	1	1
Caenis	-	-	-	-	-
Rhithrogena	-	-	26	4	3
Heptagenia	2	-	7	1	2
Heptageniidae	8	3	15	1	5
Paraleptophlebia	-	-	1	-	-
Leptophlebia	-	-	-	-	-
Centroptilum	-	-	1	-	2
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	1	-	-
Ephemera	-	-	-	-	1
Pseudocloeon	-	-	-	-	-
undetermined Nymphules	2	5	7	-	3
TRICHOPTERA					
Hydropsyche	1	1	1	-	-
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	2	2	3	5	-
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	-	-	-	-	2
Neureclipsis	-	-	-	-	-

SITE: Devon Right Bank
DATE: 23/9/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	1	-	-	-	-
Leptoceridae	2	3	2	3	-
Neotrichia	-	-	-	1	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA	-	-	1	-	-
Isoperla	-	-	3	6	2
Alloperla	-	-	-	-	2
Isogenus	49	37	101	95	96
Taenionema	-	-	-	-	-
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	-	-	-	-	-
undetermined	13	29	74	36	18
COLLEMBOLA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	6	8	51	28	91
COLEOPTERA					
Adults	-	-	-	-	-
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	2	3	-	2	-
Tanytarsini	3	-	13	13	-
Orthocladiinae	3	4	8	4	3
Tanypodinae	1	1	3	-	1
Pupae	-	-	-	-	-
Ceratopogonidae	1	-	-	-	-
Tipulidae	-	-	1	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	1	-	-	3	1
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	-	-	-	-	-
ACARI	1	2	-	1	-
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: **Devon Right Bank**
DATE: 23/9782

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	1	-	-	-	-

RIVER: North Saskatchewan River
SITE: E.L. Smith Left Bank
DATE: 1/10/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	20	6	11	13	10
Mermithoidea	5	1	4	-	1
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	1	2	2	2	1
Naididae	190	224	87	70	136
Enchytraeidae	2	8	4	1	2
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	-	-	-	-	-
Baetis	-	-	-	-	-
Tricorythodes	-	-	-	-	-
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	-	-	-	-	-
Paraleptophlebia	-	-	-	-	-
Leptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	-	-	-	-
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	-	-	-	-	-
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	-	-	-	-	-
Neureclipsis	-	-	-	-	-

SITE: E.L. Smith Left Bank
DATE: 1/10/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	1	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	-	-	-	-	-
Alloperla	-	-	-	-	-
Isogenus	-	-	-	-	-
Taenionema	-	-	-	-	-
Perlodidae	1	-	-	-	-
Chloroperlidae	1	2	-	-	-
Capniidae	-	-	-	-	-
undetermined	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	6	28	5	12	6
COLEOPTERA					
Adults	1	7	1	2	-
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	5	8	2	1	4
Tanytarsini	3	2	3	-	5
Orthocladiinae	-	1	-	1	4
Tanypodinae	-	-	-	-	-
Pupae	-	-	-	-	-
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	1	-	1	2	-
Dolichopodidae	1	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	-	-	-	-	-
ACARI	-	-	-	-	-
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: E.L. Smith Left Bank

DATE: 1/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: E.L. Smith Right Bank
DATE: 1/10/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	31	10	16	14	19
Mermithoidea	10	-	-	4	4
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	4	14	4	1	7
Naididae	30	27	24	19	9
Enchytraeidae	5	2	3	2	3
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella					
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	-	-	-	-	-
Baetis	-	-	-	-	-
Tricorythodes	-	-	-	-	-
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	-	-	-	-	-
Paraleptophlebia	-	1	-	-	-
Leptophlebia	-	-	1	-	1
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	1	-
Pseudocloeon	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	-	-	-	-
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	-	-	-	-	-
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	-	-	-	-	-
Neureclipsis	-	-	-	-	-

SITE: **E.L. Smith Right Bank**
DATE: 1/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	1	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	1	-	-	-	1
Alloperla	-	-	-	-	-
Isogenus	-	-	-	-	-
Taenionema	3	-	2	1	10
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	-	-	-	-	-
Undetermined	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	2,500	10,000	50,000	-	20,000
COLEOPTERA					
Adults	4	4	2	1	9
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	93	196	98	79	44
Tanytarsini	3	2	4	4	3
Orthocladiinae	10	9	6	5	6
Tanypodinae	1	-	4	-	1
Pupae	-	-	-	-	-
Ceratopogonidae	11	8	15	5	3
Tipulidae	-	-	-	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	1	-	-	4	-
ACARI	-	-	-	-	-
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: E.L. Smith Right Bank
DATE: 1/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	4	-	3	5	9

RIVER: North Saskatchewan River
SITE: Rossdale Left Bank
DATE: 1/10/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	63	50	144	48	21
Mermithoidea	5	2	2	5	4
TURBELLARIA	3	-	4	3	-
OLIGOCHAETA					
Tubificidae	416	298	258	205	732
Naididae	706	2150	1572	782	826
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	-	-	-	-	-
Baetis	-	-	-	-	-
Tricorythodes	-	-	-	-	-
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	-	-	-	-	-
Paraleptophlebia	-	-	-	-	-
Leptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	1
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
Undetermined Nymphules	=	=	=	=	=
TRICHOPTERA					
Hydropsyche	-	-	-	-	-
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	1	-	-	-	-
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	=	=	=	=	=
Psychomyia	-	-	-	-	-
Neureclipsis	-	-	-	-	-

SITE: Rossdale Left Bank
DATE: 1/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	1	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	-	-	-	-	-
Alloperla	-	-	-	-	-
Isogenus	-	-	-	-	-
Taenionema	-	-	-	-	-
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	-	-	-	-	-
undetermined	-	-	-	1	-
COLLEMBOLA	-	-	-	1	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	34	34	29	78	18
COLEOPTERA					
Adults	7	-	-	20	-
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	2	6	-	3	1
Tanytarsini	-	2	-	-	-
Orthocladiinae	1	38	18	4	9
Tanypodinae	1	2	-	-	1
Pupae	1	-	2	5	-
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	6	4	1	8	3
ACARI	-	-	1	1	-
MOLLUSCA					
Physidae	1	-	-	-	-

SITE: Rossdale Left Bank
DATE: 1/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	1	-	-
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	1	-	-	-	1

RIVER: North Saskatchewan River
SITE: Rossdale Right Bank
DATE: 1/10/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	1	-	-	-
NEMATODA					
undetermined	38	54	25	14	25
Mermithoidea	32	49	27	12	46
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	3	19	7	83	5
Naididae	209	307	174	6	209
Enchytraeidae	1	1	1	1	1
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	1	-	-	1	-
Baetis	-	-	1	-	-
Tricorythodes	-	-	-	-	-
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	1
Heptagenia	-	-	-	-	-
Heptageniidae	1	-	1	-	-
Paraleptophlebia	-	-	-	-	-
Leptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
undetermined Nymphules	1	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	-	-	-	-
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	-	-	-	-	-
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	-	-	-	-	-
Neureclipsis	-	-	-	-	-
	-	-	-	-	-

SITE: Rossdale Right Bank
DATE: 1/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	-	-	-	-	-
Alloperla	-	-	-	-	-
Isogenus	-	-	-	-	-
Taenionema	-	-	-	-	1
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	-	-	-	-	-
Undetermined	2	1	-	2	1
COLLEMBOLA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	8	3	11	3	7
COLEOPTERA					
Adults	-	-	-	-	-
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	1	2	-	-	1
Tanytarsini	-	-	-	-	-
Orthocladiinae	68	70	59	37	74
Tanypodinae	1	-	-	-	-
Pupae	3	4	6	1	5
Ceratopogonidae	-	-	-	-	-
Tipulidae					
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	4	-	-	3	2
Erioptera	1	1	4	-	1
ACARI	-	-	-	-	-
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: Rossdale Right Bank
DATE: 1/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: 50th St. Footbridge Left Bank
DATE: 29/9/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	44	20	32	20	24
Mermithoidea	-	-	24	4	16
TURBELLARIA					
OLIGOCHAETA					
Tubificidae	80	52	24	12	48
Naididae	3156	7112	4204	3884	2948
Enchytraeidae	-	4	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	-	4	2	2	4
Baetis	-	-	-	-	-
Tricorythodes	-	-	-	-	-
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	1	2	-	-	-
Heptageniidae	-	-	-	-	-
Paraleptophlebia	-	-	-	-	-
Leptophlebia	1	1	-	-	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	-	-	-	-
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	-	-	-	-	-
Glossosoma	-	1	-	-	1
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	-	-	-	-	-
Neureclipsis	-	-	-	-	-

SITE: 50th St. Footbridge Left Bank
DATE: 29/9/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	1
PLECOPTERA					
Isoperla	-	-	-	-	-
Alloperla	-	-	-	-	-
Isogenus	-	-	-	-	-
Taenionema	1	1	1	1	1
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	-	-	-	-	-
undetermined	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	15	33	51	15	9
COLEOPTERA					
Adults	1	12	-	2	-
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	-	4	8	-	-
Tanytarsini	-	-	-	-	-
Orthocladiinae	84	564	240	264	328
Tanypodinae	-	-	-	-	-
Pupae	-	20	12	16	20
Ceratopogonidae	-	-	-	-	-
Tipulidae					
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	1	1	1	2	-
Erioptera	-	-	-	1	-
ACARI					
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: 50th St. Footbridge Left Bank
DATE: 29/9/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	9	9	10	8	13

RIVER: North Saskatchewan River Sorted By: B. Wright
SITE: 50th St. FootBridge Right Bank Counts and Identification: A. M. Anderson
DATE: 29/9/82

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	100	40	100	100	68
Mermithoidea	72	96	28	24	56
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	92	24	8	36	84
Naididae	4366	2988	3244	2988	5416
Enchytraeidae	4	-	4	-	4
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	6	21	6	-	3
Baetis	-	-	-	-	-
Tricorythodes	-	24	13	3	2
Caenis	-	-	1	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	-	-	-	-	-
Paraleptophlebia	-	-	-	-	-
Leptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	1	-	-	-	-
Pseudocloeon	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	-	-	-	-
Cheumatopsyche	-	1	-	-	-
Hydropsychidae	-	-	-	-	-
Glossosoma	-	-	-	-	-
Brachycentrus	1	-	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	-	-	-	-	-
Neureclipsis	-	-	-	-	-

SITE: 50th St. Footbridge Right Bank
DATE: 29/9/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	-	-	1	-	-
Alloperla	-	-	-	-	-
Isogenus	-	-	-	-	-
Taenionema	1	1	1	-	-
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	-	-	-	-	-
Undetermined	-	-	-	-	1
COLLEMBOLA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	8	21	9	2	19
COLEOPTERA					
Adults	4	1	-	-	2
Elmidae Larvae					
DIPTERA					
Chironomidae					
Chironomini	12	4	-	-	4
Tanytarsini	-	-	-	-	-
Orthocladiinae	272	548	252	156	276
Tanypodinae	-	-	-	-	-
Pupae	44	21	8	32	12
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	1	1	3	3	1
Erioptera	-	1	-	-	1
ACARI	-	2	-	-	-
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: 50th St. Footbridge Right Bank
DATE: 29/9/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	-	2	2	-	2

RIVER: North Saskatchewan River Sorted By: B. Wright
SITE: Rundle Footbridge Left Bank Counts and Identification: A. M. Anderson
DATE: 29/9/82

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	24	44	12	40	16
Mermithoidea	44	44	72	76	64
TURBELLARIA	-	1	1	-	-
OLIGOCHAETA					
Tubificidae	12	40	12	48	44
Naididae	3408	2624	3183	2289	2484
Enchytraeidae	4	8	-	4	4
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	70	60	58	81	55
Baetis	5	1	3	4	3
Tricorythodes	54	11	15	13	25
Caenis	1	-	-	-	-
Rhithrogena	1	-	2	-	-
Heptagenia	15	9	14	6	3
Heptageniidae	1	2	2	3	5
Paraleptophlebia	-	-	-	-	-
Leptophlebia	-	-	1	-	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	2	-	1	2	-
Cheumatopsyche	3	-	-	-	-
Hydropsychidae	-	-	1	1	-
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	1	-	-
Psychomyia	-	-	-	-	-
Neureclipsis	-	-	-	-	-

SITE: Rundle Footbridge Left Bank
DATE: 29/9/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	4	2	6	8	1
Alloperla	-	-	-	-	-
Isogenus	-	-	-	-	-
Taenionema	59	69	75	53	50
Perlodidae	-	-	-	-	-
Chloroperlidae	10	4	4	9	4
Capniidae	-	-	12	21	32
undetermined	4	-	-	-	-
COLLEMBOLA	1	-	-	1	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	161	114	71	32	65
COLEOPTERA					
Adults	1	3	2	2	2
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	8	4	8	4	-
Tanytarsini	4	8	-	4	-
Orthocladiinae	916	672	828	931	596
Tanypodinae	20	4	-	20	-
Pupae	40	24	23	8	-
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	2	-	2	-	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	12	-	4	10	7
ACARI	1	9	2	1	-
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: **Rundle Footbridge Left Bank**
DATE: 29/9/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Sphaeriidae	-	-	-	-	-
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae	-	-	-	-	-
Ferrissia	-	-	2	1	-

RIVER: North Saskatchewan River Sorted By: B. Wright
SITE: Rundle Footbridge Right Bank Counts and Identification: A. M. Anderson
DATE: 29/9/82

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	5	-	32	-	16
Mermithoidea	1	24	-	16	-
TURBELLARIA	1	-	-	-	-
OLIGOCHAETA					
Tubificidae	102	168	68	1840	288
Naididae	31920	14584	28160	35136	20016
Enchytraeidae	2	8	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	-	-	-	-	-
Baetis	-	-	-	-	-
Tricorythodes	1	-	-	3	-
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	-	-	-	-	-
Paraleptophlebia	-	-	-	-	-
Leptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	-	-	1	-
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	-	-	-	-	-
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	-	-	-	-	-
Neureclipsis	-	-	-	-	-

SITE: *Rundle Footbridge Right Bank*
DATE: 29/9/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	-	-	-	-	-
Alloperla	-	-	-	-	-
Isogenus	-	-	-	-	-
Taenionema	-	-	-	-	-
Perlodidae	-	-	-	-	-
Chloroperlidae	2	-	-	1	-
Capniidae	-	-	-	-	-
Undetermined	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	4	-	2	1	4
COLEOPTERA					
Adults	-	-	-	-	-
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	7	8	8	-	-
Tanytarsini	1	-	-	-	-
Orthocladiinae	48	208	736	208	464
Tanypodinae	-	-	-	-	-
Pupae	4	8	48	34	39
Ceratopogonidae	1	1	-	-	-
Tipulidae	-	-	-	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	-	-	-	6	8
Erioptera	1	1	-	-	-
ACARI	-	-	-	-	-
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: Rundle Footbridge Right Bank
DATE: 29/9/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Beverly Bridge Left Bank
DATE: 1/10/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	8	38	14	12	14
Mermithoidea	28	26	34	14	36
TURBELLARIA	-	-	-	1	-
OLIGOCHAETA					
Tubificidae	12	40	34	20	12
Naididae	1546	574	2006	1124	1712
Enchytraeidae	-	2	2	4	4
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	34	7	9	5	7
Baetis	9	-	2	2	-
Tricorythodes	27	3	3	10	3
Caenis	1	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	9	-	-	1	-
Paraleptophlebia	-	-	-	-	1
Leptophlebia	-	-	-	1	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	1	-	-	1	-
undetermined Nymphules	1	-	1	-	-
TRICHOPTERA					
Hydropsyche	3	-	-	-	-
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	1	-	-	-	-
Glossosoma	-	-	-	-	-
Brachycentrus	1	-	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	-	-	-	-	-
Neureclipsis	1	-	-	-	-

SITE: Beverly Bridge Left Bank
DATE: 1/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	10	8	2	4	7
Alloperla	12	1	1	5	-
Isogenus	-	-	-	-	-
Taenionema	2	1	1	2	-
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	16	9	9	4	12
undetermined	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	21	15	29	8	21
COLEOPTERA					
Adults	1	2	2	-	2
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	6	14	6	8	8
Tanytarsini	8	-	-	2	-
Orthocladiinae	428	164	254	430	274
Tanypodinae	8	-	2	6	2
Pupae	2	4	8	16	10
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	1	-	-	-	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	6	3	2	1	4
ACARI	-	-	-	-	-
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: **Beverly Bridge Left Bank**
DATE: 1/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	3	1	3	3	7

RIVER: North Saskatchewan River Sorted By: B. Wright
SITE: Beverly Bridge Right Bank Counts and Identification: A. M. Anderson
DATE: 11/10/82

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
Undetermined	-	24	8	8	-
Mermithoidea	40	8	8	32	24
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	120	152	264	136	176
Naididae	6192	7112	9120	8752	7344
Enchytraeidae	8	-	8	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	-	-	1	-	-
Baetis	-	-	-	-	-
Tricorythodes	9	3	4	3	4
Caenis	-	-	-	1	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	-	-	-	-	-
Paraleptophlebia	-	-	-	-	-
Leptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
Undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	-	-	-	-
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	-	-	-	-	-
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	-	-	-	-	-
Neureclipsis	-	-	-	-	-

SITE: North Saskatchewan River
DATE: Beverly Bridge Right Bank Continued
11/10/82

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	1	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	1	1	-	-	-
Alloperla	-	-	-	-	-
Isogenus	-	-	-	-	-
Taenionema	-	-	-	-	-
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	1	-	-	1	-
undetermined	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	-	1	7	12	12
COLEOPTERA					
Adults	-	1	-	-	-
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	99	140	120	224	164
Tanytarsini	-	-	-	-	4
Orthocladiinae	184	184	168	304	160
Tanypodinae	4	16	16	-	4
Pupae	32	16	20	8	12
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	13	2	6	9	11
ACARI					
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: **Beverly Bridge Right Bank**
DATE: 11/10/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	4	-	-
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	2	4	5	4	4

RIVER: North Saskatchewan River
SITE: Cloverdale Left Bank
DATE: 2/10/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	1	-	-	-	-
NEMATODA					
undetermined	20	16	24	-	12
Mermithoidea	12	16	4	12	-
TURBELLARIA					
OLIGOCHAETA					
Tubificidae	700	640	1088	264	352
Naididae	3584	4892	4212	1812	2452
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	1	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	-	-	-	-	1
Baetis	2	-	-	-	-
Tricorythodes	1	-	-	-	-
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	-	-	-	-	-
Heptageniidae	-	-	-	-	-
Paraleptophlebia	-	-	-	-	-
Leptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	-	-	-	-	-
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	-	-	-	-	-
Glossosoma	-	2	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	-	-	-	-	-
Neureclipsis	-	-	-	-	-

SITE: **Cloverdale Left Bank**
DATE: 2/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	1	-	-	-	-
Alloperla	-	-	-	-	-
Isogenus	-	-	-	-	-
Taenionema	-	-	-	-	-
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	-	-	-	-	-
undetermined	-	-	-	-	-
COLLEMBOLA	-	1	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	10	6	6	4	11
COLEOPTERA					
Adults	-	1	1	-	1
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	-	-	-	-	-
Tanytarsini	-	-	-	-	-
Orthocladiinae	20	32	4	12	20
Tanypodinae	4	-	-	-	-
Pupae	-	-	-	-	4
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Ephydridae	-	1	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	-	-	1	-	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	18	3	4	-	2
ACARI	1	2	1	1	1
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: **Cloverdale Left Bank**
DATE: 2/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	3	1	-	-	2
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	15	28	20	3	10

RIVER: North Saskatchewan River
SITE: Cloverdale Right Bank
DATE: 1/10/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	2	4	-	4	4
Mermithoidea	138	108	156	16	80
TURBELLARIA					
OLIGOCHAETA					
Tubificidae	14	46	28	28	16
Naididae	800	2022	3348	2316	2396
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	9	6	18	1	3
Baetis	45	33	51	-	17
Tricorythodes	33	53	72	1	9
Caenis	-	-	-	-	1
Rhithrogena	1	-	2	1	-
Heptagenia	8	-	6	-	-
Heptageniidae	1	-	2	-	-
Paraleptophlebia	-	1	-	-	-
Leptophlebia	-	1	-	-	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	6	-	-
undetermined Nymphules	-	-	1	-	-
TRICHOPTERA					
Hydropsyche	65	63	86	-	28
Cheumatopsyche	1	-	2	-	-
Hydropsychidae	-	4	3	-	-
Glossosoma	19	16	24	-	6
Brachycentrus	1	1	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	-	3	3	2	1
Neureclipsis	-	-	-	-	-

SITE: Cloverdale Right Bank
DATE: 1/10/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	1	1	3	-	2
Alloperla	-	-	2	-	-
Isogenus	-	-	-	-	-
Taenionema	-	-	-	-	-
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	10	4	5	2	1
Undetermined	7	5	9	3	-
COLLEMBOLA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	18	12	19	72	7
COLEOPTERA					
Adults	-	-	-	-	-
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	18	88	72	32	40
Tanytarsini	2	-	4	4	-
Orthocladiinae	1290	1438	1068	460	1204
Tanypodinae	80	82	136	-	44
Pupae	72	57	48	36	28
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	2	1	1	-	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	22	21	22	59	6
ACARI	1	2	2	1	-
MOLLUSCA					
Physidae	2	2	2	-	-

SITE: Cloverdale Right Bank
DATE: 1/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	-	3	1
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	31	75	41	330	34

RIVER: North Saskatchewan River Sorted By: B. Wright
SITE: Fort Saskatchewan Left Bank Counts and Identification: A. M. Anderson
DATE: 2/10/82

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	2	-	-	2	1
NEMATODA					
undetermined	52	20	32	40	24
Mermithoidea	396	164	492	436	172
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	452	28	304	76	836
Naididae	100	92	252	128	224
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	11	3	29	45	20
Baetis	-	2	-	3	2
Tricorythodes	19	7	81	56	118
Caenis	-	-	-	-	-
Rhithrogena	1	4	5	8	15
Heptagenia	5	-	7	8	68
Heptageniidae	3	-	1	5	2
Paraleptophlebia	-	-	-	-	-
Leptophlebia	-	-	1	-	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
undetermined Nymphules	-	-	-	1	1
TRICHOPTERA					
Hydropsyche	3	2	2	4	5
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	1	-	-	3	1
Glossosoma	1	-	-	1	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	-	-	-	-	-
Neureclipsis	-	-	-	-	-

SITE: Fort Saskatchewan Left Bank
DATE: 2/10/ 82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	1	-	14	7	19
Alloperla	-	-	-	-	-
Isogenus	-	-	-	-	-
Taenionema	-	-	-	-	-
Perlodidae	-	-	-	-	-
Chloroperlidae	1	2	3	1	1
Capniidae	119	4	36	77	34
undetermined	-	-	-	-	-
COLLEMBOLA	-	-	-	1	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	25	11	30	35	41
COLEOPTERA					
Adults	-	-	-	-	-
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	20	-	4	12	24
Tanytarsini	4	-	8	-	-
Orthocladiinae	1700	700	1432	1860	1648
Tanypodinae	20	-	32	24	-
Pupae	57	24	88	80	148
Ceratopogonidae	1	-	-	-	-
Tipulidae	-	1	-	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	-	-	-	2	1
Dolichopodidae	-	-	1	-	-
Simuliidae	-	-	-	-	-
Adult	7	41	4	9	4
ACARI					
MOLLUSCA					
Physidae	-	-	19	5	33

SITE: Fort Saskatchewan Left Bank
DATE: 2/10/82 Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	18	-	2	3	3
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	1	-	1
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	83	11	120	18	87

RIVER: North Saskatchewan River Sorted By: B. Wright
SITE: Fort Saskatchewan Right Bank Counts and Identification: A. M. Anderson
DATE: 2/10/82

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	1	-	-	-	2
NEMATODA					
undetermined	4	4	8	24	-
Mermithoidea	132	84	292	196	164
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	872	1268	1732	920	2368
Naididae	13744	6980	2752	1000	3564
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	3	-	-	1
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	4	3	17	50	35
Baetis	-	-	3	4	1
Tricorythodes	3	7	23	103	49
Caenis	-	-	-	-	1
Rhithrogena	-	-	2	1	4
Heptagenia	1	6	16	2	10
Heptageniidae	1	1	1	1	-
Paraleptophlebia	-	-	-	-	1
Leptophlebia	2	-	7	-	4
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	1	7	50	100	83
Cheumatopsyche	-	-	-	-	-
Hydropsychidae	-	-	3	4	-
Glossosoma	2	2	3	-	1
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	-	-	1	-	-
Neureclipsis	-	-	-	-	-

SITE: Fort Saskatchewan Right Bank Continued
DATE: 2/10/82

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	3	6	27	14	19
Alloperla	-	-	-	2	4
Isogenus	-	-	-	-	-
Taenionema	-	-	-	-	-
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	-	1	13	7	24
undetermined	-	-	1	-	-
COLLEMBOLA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	221	246	210	199	184
COLEOPTERA					
Adults	-	4	7	2	4
Elmidae Larvae	-	-	-	1	-
DIPTERA					
Chironomidae					
Chironomini	32	32	24	32	32
Tanytarsini	-	24	32	-	-
Orthocladiinae	224	584	604	1084	892
Tanypodinae	-	-	4	24	128
Pupae	-	8	8	24	8
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	1	-	-
Rhagionidae	-	-	-	-	-
Empididae	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	10	8	6	3	-
ACARI	1	-	-	3	-
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: Fort Saskatchewan Right Bank
DATE: 2/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	1	-	-
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	16	21	50	31	27

RIVER: North Saskatchewan River
SITE: Sturgeon Left Bank
DATE: 2/10/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	1	-	-	-	-
NEMATODA					
undetermined	44	52	52	40	20
Mermithoidea	44	48	32	44	20
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	520	260	916	1000	708
Naididae	28	12	72	16	64
Enchytraeidae	-	-	-	-	-
HIRUDINEA	8	4	-	5	2
CRUSTACEA					
Amphipoda					
Hyalella	10	14	45	4	13
Gammarus	-	-	6	-	1
EPHEMEROPTERA					
Ephemerella	-	1	2	-	3
Baetis	1	2	-	-	2
Tricorythodes	4	11	75	3	6
Caenis	-	-	15	1	2
Rhithrogena	-	-	1	-	1
Heptagenia	4	4	33	1	17
Heptageniidae	-	-	5	1	1
Paraleptophlebia	-	-	-	-	-
Leptophlebia	2	2	2	-	1
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	1	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
undetermined Nymphules	-	-	1	-	-
TRICHOPTERA					
Hydropsyche	-	2	4	-	8
Cheumatopsyche	-	1	-	-	-
Hydropsychidae	-	-	-	-	-
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	-	-	6	-	1
Neureclipsis	-	-	3	-	5

SITE: Sturgeon Left Bank
DATE: 2/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	1	4	5	-	2
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	2	2	9	1	4
Alloperla	-	-	-	-	-
Isogenus	-	-	-	-	-
Taenionema	-	-	4	1	1
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	8	10	12	3	4
undetermined	-	-	-	-	-
COLLEMBOLA	1	12	1	4	-
ODONATA	-	-	-	1	-
HEMIPTERA					
Corixidae	33	68	77	36	61
COLEOPTERA					
Adults	12	20	3	9	23
Elmidae Larvae	13	34	32	11	14
DIPTERA					
Chironomidae					
Chironomini	16	40	84	8	20
Tanytarsini	16	28	8	80	16
Orthocladiinae	196	204	376	84	328
Tanypodinae	8	12	16	-	16
Pupae	1	5	-	-	-
Ceratopogonidae	-	-	1	-	-
Tipulidae	-	-	-	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	-	1	-	-	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	6	31	3	20	5
ACARI	-	-	-	-	-
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: Sturgeon Left Bank
DATE: 2/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	3	-	2
Planorbidae					
Sphaeriidae					
Pisidium	1	8	29	17	5
Sphaerium	-	1	2	-	1
Ancylidae					
Ferrissia	40	30	171	24	76

RIVER: **North Saskatchewan River**
SITE: **Sturgeon Right Bank**
DATE: 2/10/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	4	28	-	8	16
Mermithoidea	88	52	16	72	104
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	980	984	992	1788	1912
Naididae	368	284	536	600	5872
Enchytraeidae	-	4	-	-	-
HIRUDINEA	1	1	-	12	1
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	7	4	10	8	-
Baetis	5	4	22	4	-
Tricorythodes	60	80	82	80	4
Caenis	-	-	-	2	-
Rhithrogena	1	-	2	2	-
Heptagenia	8	30	16	2	3
Heptageniidae	-	-	-	2	-
Paraleptophlebia	-	-	-	-	-
Leptophlebia	-	1	-	-	3
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
Undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	152	184	150	154	-
Cheumatopsyche	3	-	-	4	-
Hydropsychidae	-	2	-	-	1
Glossosoma	-	-	-	4	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	-	-	2	2	-
Neureclipsis	-	-	-	-	-

SITE: **Sturgeon Right Bank**
DATE: 2/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	12	10	10	12	-
Alloperla	-	-	-	-	-
Isogenus	-	-	-	-	-
Taenionema	-	-	-	-	-
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	35	24	26	42	-
undetermined	-	-	-	-	-
COLLEMBOLA	1	-	-	-	1
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	92	112	112	112	104
COLEOPTERA					
Adults	1	-	-	-	12
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	40	76	76	48	24
Tanytarsini	4	4	-	-	8
Orthocladiinae	588	732	640	1008	456
Tanypodinae	88	56	64	60	24
Pupae	4	8	-	4	20
Ceratopogonidae	-	-	-	-	-
Tipulidae					
Ephydridae	-	-	-	-	-
Tabanidae	-	2	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	1	4	2	2	6
Erioptera	-	-	-	-	2
ACARI					
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: **Sturgeon Right Bank**
DATE: 2/10/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	-	-	2
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	4	-	10	4	4
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	5	10	20	50	28

RIVER: North Saskatchewan River
SITE: Vinca Bridge Left Bank
DATE: 24/9/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	-	-	-	-	4
Mermithoidea	50	42	36	42	46
TURBELLARIA					
OLIGOCHAETA					
Tubificidae	318	638	332	654	56
Naididae	6	6	10	6	6
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	-	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	8	76	88	68	54
Baetis	-	44	8	8	40
Tricorythodes	320	220	460	244	272
Caenis	-	-	-	-	-
Rhithrogena	-	-	4	-	-
Heptagenia	20	44	60	20	68
Heptageniidae	4	-	32	-	12
Paraleptophlebia	-	-	-	-	-
Leptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	84	368	264	124	380
Cheumatopsyche	-	8	8	-	20
Hydropsychidae	8	5	12	-	8
Glossosoma	-	-	-	-	-
Brachycentrus	-	1	-	-	4
Oecetis	-	-	-	-	-
Psychomyia	28	28	20	12	44
Neureclipsis	-	-	-	-	4

SITE: **Vinca Bridge Left Bank**
DATE: 24/9/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	12	20	20	8	12
Alloperla	-	-	4	9	8
Isogenus	-	-	-	-	-
Taenionema	-	-	-	-	-
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	-	-	4	-	8
undetermined	-	-	-	4	-
COLLEMBOLA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	628	180	208	452	116
COLEOPTERA					
Adults	-	1	-	-	-
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	578	114	60	78	112
Tanytarsini	2	4	10	2	8
Orthocladiinae	476	652	500	618	848
Tanypodinae	92	198	118	96	376
Pupae	6	8	-	6	4
Ceratopogonidae	4	-	-	-	1
Tipulidae	-	-	-	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	-	2	12	-	10
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	8	-	4	-	10
ACARI	4	-	-	4	8
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: Vinca Bridge Left Bank
DATE: 24/9/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	4	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	-	-	-	-	-

RIVER: North Saskatchewan River
SITE: Vinca Bridge Right Bank
DATE: 24/9782

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	6	3	1	4	-
NEMATODA					
undetermined	24	-	4	8	12
Mermithoidea	66	28	28	40	48
TURBELLARIA					
OLIGOCHAETA					
Tubificidae	260	392	176	244	392
Naididae	572	496	812	516	324
Enchytraeidae	-	-	-	-	-
HIRUDINEA	1	-	-	1	-
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	1	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	11	11	5	4	3
Baetis	-	-	-	1	1
Tricorythodes	65	78	53	56	51
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	7	4	3	13	2
Heptageniidae	-	-	-	1	-
Paraleptophlebia	-	-	-	-	-
Leptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	31	39	11	22	18
Cheumatopsyche	1	-	1	-	-
Hydropsychidae	1	1	-	-	1
Glossosoma	-	3	1	-	1
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	8	15	3	15	6
Neureclipsis	-	-	-	-	-

SITE: **Vinca Bridge Right Bank**
DATE: 24/9/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	1
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	1	-	1	1	1
Alloperla	-	-	-	-	-
Isogenus	-	-	-	-	-
Taenionema	-	-	-	-	-
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	3	4	-	3	1
undetermined	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	8	19	14	27	14
COLEOPTERA					
Adults	-	1	-	-	-
Elmidae Larvae	-	1	2	-	-
DIPTERA					
Chironomidae					
Chironomini	204	236	312	236	132
Tanytarsini	20	8	4	_0	8
Orthocladiinae	650	772	452	708	712
Tanypodinae	46	80	28	28	8
Pupae	45	46	12	48	72
Ceratopogonidae	-	-	1	-	-
Tipulidae	-	-	-	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	1	-	-
Empididae	1	2	-	1	2
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	3	-	7	-	1
ACARI	-	-	1	1	-
MOLLUSCA					
Physidae	-	-	-	-	-

SITE: Vinca Bridge Right Bank
DATE: 24/9/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	-	1	-
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	1	-	-
Ancylidae					
Ferrissia	3	2	1	2	-

RIVER: North Saskatchewan River
SITE: Pakan Bridge Left Bank
DATE: 24/9/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	12	20	32	64	8
NEMATODA					
undetermined	-	-	4	-	4
Mermithoidea	4	20	40	32	52
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	80	164	124	116	160
Naididae	100	60	80	252	120
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	-	-	-	1
CRUSTACEA					
Amphipoda					
Hyalella	-	-	-	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	204	212	44	156	44
Baetis	16	28	4	12	8
Tricorythodes	236	796	240	456	276
Caenis	-	-	-	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	28	124	68	172	76
Heptageniidae	12	-	4	4	12
Paraleptophlebia	-	-	-	-	-
Leptophlebia	-	-	-	-	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	96	16	4	128	8
Cheumatopsyche	4	-	4	8	-
Hydropsychidae	12	-	-	4	-
Glossosoma	-	-	-	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	4	-	-
Psychomyia	24	4	-	4	4
Neureclipsis	-	-	-	-	-

SITE: **Pakan Bridge Left Bank**
DATE: 24/9/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	56	92	12	52	28
Alloperla	-	24	4	20	4
Isogenus	-	-	-	-	-
Taenionema	-	-	-	-	-
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	-	-	8	-	4
Undetermined	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
ODONATA	-	-	-	-	-
HEMIPTERA					
Corixidae	72	220	120	12	60
COLEOPTERA					
Adults	-	-	-	-	-
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae	32	160	320	60	216
Chironomini	24	108	24	28	28
Tanytarsini	832	820	692	656	1104
Orthocladiinae	52	20	12	88	16
Tanypodinae	36	36	24	40	56
Pupae	-	-	-	-	-
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	-	-
Rhagionidae	-	-	-	-	-
Empididae	-	-	-	-	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	-	8	-	-	-
ACARI					
MOLLUSCA					
Physidae	-	4	-	-	-

SITE: **Pakan Bridge Left Bank**
DATE: 24/9/82

Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	1
Sphaeriidae					
Pisidium	-	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	20	4	-	-	28

RIVER: North Saskatchewan River
SITE: Pakan Right Bank
DATE: 24/9/82

Sorted By: B. Wright
Counts and Identification: A. M. Anderson

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
COELENTERATA					
Hydrozoa	-	-	-	-	-
NEMATODA					
undetermined	4	-	4	-	-
Mermithoidea	96	12	24	48	16
TURBELLARIA	-	-	-	-	-
OLIGOCHAETA					
Tubificidae	100	336	160	512	132
Naididae	88	168	132	64	116
Enchytraeidae	-	-	-	-	-
HIRUDINEA	-	1	2	-	-
CRUSTACEA					
Amphipoda					
Hyalella	4	1	1	-	-
Gammarus	-	-	-	-	-
EPHEMEROPTERA					
Ephemerella	132	24	80	44	12
Baetis	44	12	36	4	-
Tricorythodes	664	208	384	656	128
Caenis	-	-	1	-	-
Rhithrogena	-	-	-	-	-
Heptagenia	104	12	152	108	12
Heptageniidae	-	-	4	20	-
Paraleptophlebia	-	-	-	-	-
Leptophlebia	-	-	-	3	-
Centroptilum	-	-	-	-	-
Parameletus	-	-	-	-	-
Stenonema	-	-	-	-	-
Ameletus	-	-	-	-	-
Ephemera	-	-	-	-	-
Pseudocloeon	-	-	-	-	-
undetermined Nymphules	-	-	-	-	-
TRICHOPTERA					
Hydropsyche	44	4	12	-	-
Cheumatopsyche	-	-	4	4	-
Hydropsychidae	8	-	-	4	-
Glossosoma	4	-	4	-	-
Brachycentrus	-	-	-	-	-
Oecetis	-	-	-	-	-
Psychomyia	4	4	12	16	8
Neureclipsis	8	-	8	8	-

SITE: **Pakan Right Bank**
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Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Ceraclea	-	-	-	-	-
Polycentropus	-	-	-	-	-
Leptoceridae	-	-	-	-	-
Neotrichia	-	-	-	-	-
Lepidostoma	-	-	-	-	-
Hydroptilidae	-	-	-	-	-
PLECOPTERA					
Isoperla	44	20	20	40	-
Alloperla	-	4	4	-	-
Isogenus	-	-	-	-	-
Taenionema	4	-	-	-	-
Perlodidae	-	-	-	-	-
Chloroperlidae	-	-	-	-	-
Capniidae	-	-	4	4	-
undetermined	-	-	-	-	-
COLLEMBOLA	-	-	-	-	-
ODONATA	-	1	-	-	-
HEMIPTERA					
Corixidae	2600	1600	1240	3200	1600
COLEOPTERA					
Adults	4	-	-	1	-
Elmidae Larvae	-	-	-	-	-
DIPTERA					
Chironomidae					
Chironomini	116	96	68	356	92
Tanytarsini	12	4	20	12	4
Orthocladiinae	580	360	372	340	232
Tanypodinae	88	20	36	136	16
Pupae	32	36	16	40	28
Ceratopogonidae	-	-	-	-	-
Tipulidae	-	-	-	-	-
Ephydridae	-	-	-	-	-
Tabanidae	-	-	-	1	-
Rhagionidae	-	-	-	-	-
Empididae	8	-	4	16	-
Dolichopodidae	-	-	-	-	-
Simuliidae	-	-	-	-	-
Adult	4	24	12	4	12
ACARI	-	-	4	-	-
MOLLUSCA					
Physidae	-	-	-	1	-

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Continued

	REP.#1	REP.#2	REP.#3	REP.#4	REP.#5
Lymnaeidae	-	-	-	-	-
Planorbidae	-	-	-	-	-
Sphaeriidae					
Pisidium	4	-	-	-	-
Sphaerium	-	-	-	-	-
Ancylidae					
Ferrissia	4	4	12	4	8